1941-42

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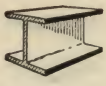
A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch.

Size in Inches	Wt. Per Ft. Lbs.	Thickness of Web	Width of Flange	Net Extra for Size	Stock Lgths., Ft.
3	5.7	0.170	2.330	Base	50
	6.5	0.251	2.411	"	N.Y. 40
	7.5	0.349	2.509	"	50
4	7.7	0.190	2.660	"	50
	8.5	0.253	2.723	"	50
	9.5	0.326	2.796	"	50
	10.5	0.400	2.870	"	50
5	10.0	0.210	3.000	"	60
	12.25	0.347	3.137	"	60
	14.75	0.494	3.284	"	60
6	12.5	0.230	3.330	"	60
	14.75	0.343	3.443	"	60
	17.25	0.465	3.565	"	60
7	15.3	0.250	3.660	"	60
	17.5	0.345	3.755	"	60
	20.0	0.450	3.860	"	60
8	18.4	0.270	4.000	"	60
	20.5	0.349	4.079	"	60
	23.0	0.441	4.171	"	40
	25.5	0.532	4.262	"	60
9	21.8	0.290	4.330	"	60
	25.0	0.397	4.437	"	60
	30.0	0.561	4.601	"	N.Y. 60
	35.0	0.724	4.764	"	40
10	22.0	0.250	5.000	.05	Chgo. 60
	25.4	0.310	4.660	Base	60
	30.0	0.447	4.797	"	60
	35.0	0.594	4.944	"	60
	40.0	0.741	5.091	"	60
12	25.0	0.270	5.000	.05	Chgo. 60
	31.8	0.350	5.000	Base	60
	35.0	0.428	5.078	"	60
	40.8	0.460	5.250	"	60
	45.0	0.565	5.355	"	60
	50.0	0.687	5.477	"	60
	55.0	0.810	5.600	"	60
15	42.9	0.410	5.500	Base	60
	50.0	0.550	5.640	"	60
	55.0	0.648	5.738	"	60
	60.8	0.590	6.000	"	60
	70.0	0.770	6.180	"	Chgo. 60
18	54.7	0.460	6.000	.10	70
	60.0	0.547	6.087	.10	60
	65.0	0.629	6.169	.10	N.Y. 60
	70.0	0.711	6.251	.10	60
20	65.4	0.500	6.250	.10	70
	81.4	0.600	7.000	.10	65
	90.0	0.750	7.125	.10	60
	100.0	0.873	7.273	.10	Clev. 60
24	79.9	0.500	7.000	.10	70
	100.0	0.747	7.247	.10	65
	105.9	0.625	7.875	.10	Chgo. 70

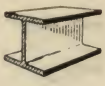
5 feet and longer cut without charge. Under 5 feet see extras in back of book.

BEAMS—INLAND HI-STEEL

See Hi-Steel Section.



WIDE FLANGE STRUCTURAL AND H SECTIONS



A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch.

Section & Size in Inches	Wt. per Ft. Lbs.	Net Extra for Size	Depth of Section	Width of Flange	Thickness of Web	Stock Lgths., Ft.
BS ....4x 4.....	7.5.....	.25....	3.87....	3.950.....	.170.....	60
	10.0	.25	4.00	4.000	.265	40
H ....4x 4....	10.0.....	.25....	4.00....	4.000.....	.220.....	N.Y.
BS ....4x 4....	13.0.....	.15....	4.00....	4.060.....	.345.....	60
H .....4x 4....	13.8.....	.10....	4.00....	4.000.....	.313.....	40
H .....5x 5....	13.5.....	.15....	4.86....	4.990.....	.230.....	60
	16.0	.15	5.00	5.000	.240	60
	18.5	.10	5.12	5.025	.265	60
	18.9	.10	5.00	5.000	.313	40
BJ ....6x 3....	10.0.....	.15....	6.00....	3.000.....	.188.....	60
BJ ....6x 4.....	8.5.....	.20....	5.83....	3.940.....	.170.....	60
CBL ...6x 4....	12.0.....	.15....	6.00....	4.000.....	.230.....	60
	16.0	.15	6.25	4.030	.260	60
B .....6x 6....	15.5.....	.15....	6.00....	6.000.....	.240.....	60
	18.0	.15	6.11	6.010	.250	N.Y.
	27.0	.10	6.25	6.125	.375	40
H ....6x 6....	20.0.....	.10....	6.00....	6.000.....	.250.....	60
	22.5	.10	6.00	6.063	.375	60
	25.0	.10	6.00	5.938	.313	60
	27.5	.10	6.00	6.063	.438	60
CB ....6x 9½..	50.0.....	.10....	5.986...	9.617.....	.606.....	N.Y.
BJ ....7x 3½..	12.0.....	.15....	7.00....	3.500.....	.188.....	60
BJ ....8x 4....	10.0.....	.20....	7.90....	3.940.....	.170.....	60
CBL ...8x 4....	13.0.....	.15....	8.00....	4.000.....	.230.....	60
	15.0	.15	8.12	4.015	.245	N.Y.
B .....8x 5¼..	17.0.....	.05....	8.00....	5.250.....	.230.....	60
CBL ...8x 5¼..	19.0.....	.05....	8.09....	5.264.....	.244.....	60
	21.0	.05	8.19	5.272	.252	60
B .....8x 6½..	24.0.....	.10....	7.93....	6.500.....	.245.....	60
	27.0	.10	8.03	6.528	.273	60
B .....8x 8....	31.0.....	.10....	8.00....	8.000.....	.288.....	60
H .....8x 8....	32.6.....	.10....	8.00....	7.938.....	.313.....	N.Y.
B .....8x 8....	33.0.....	.10....	8.06....	8.012.....	.300.....	60
H .....8x 8....	34.3.....	.10....	8.00....	8.000.....	.375.....	60
B .....8x 8....	35.0.....	.10....	8.12....	8.027.....	.315.....	60
	36.0	.10	8.026	8.158	.446	60
	40.0	.10	8.25	8.077	.365	60
	48.0	.10	8.50	8.117	.405	60
	58.0	.10	8.75	8.222	.510	60
	67.0.....	.10....	9.00....	8.287.....	.575.....	N.Y.

(Continued)

5 feet and longer cut without charge. Under 5 feet see extras in back of book.

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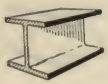
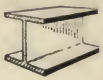


WIDE FLANGE STRUCTURAL AND H SECTIONS—(Cont'd)

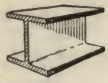


A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch.

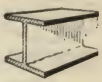
Section & Size in Inches	Wt. per Ft. Lbs.	Net Extra for Size	Depth of Section	Width of Flange	Thickness of Web	Stock Lgths., Ft.
(Continued)						
BJ ...10x 4....	11.5	.20	9.87	3.950	.180	60
B ....10x 4....	15.0	.15	10.00	4.000	.230	60
CBL ..10x 4....	17.0	.15	10.12	4.010	.240	60
	19.0	.15	10.25	4.020	.250	60
B ....10x 5¾..	21.0	.05	9.90	5.750	.240	60
	23.0	.05	10.00	5.750	.240	60
	26.0	.05	10.12	5.769	.259	60
	29.0	.05	10.22	5.799	.289	60
B ....10x 8....	33.0	.10	9.75	7.964	.292	60
	37.0	.10	9.88	7.978	.306	60
	41.0	.10	10.00	8.000	.328	60
	45.0	.10	10.12	8.022	.350	60
B ....10x10....	42.0	.10	9.72	10.078	.418	60
	49.0	.10	10.00	10.000	.340	60
	54.0	.10	10.12	10.028	.368	60
	60.0	.10	10.25	10.075	.415	60
	66.0	.10	10.38	10.117	.457	Chgo.
	72.0	.10	10.50	10.170	.510	60
	77.0	.10	10.62	10.195	.535	Chgo.
	89.0	.10	10.88	10.275	.615	Chgo.
	100.0	.10	11.12	10.345	.685	N.Y.
	112.0	.10	11.38	10.415	.755	N.Y.
BJ....12x 4....	14.0	.20	11.91	3.970	.200	60
CBL ..12x 4....	16.5	.15	12.00	4.000	.230	60
	19.0	.15	12.16	4.010	.240	60
	22.0	.15	12.31	4.030	.260	60
B ....12x 6½..	25.0	.05	11.87	6.500	.240	60
	28.0	.05	12.00	6.500	.240	60
	32.0	.05	12.12	6.533	.273	60
	36.0	.05	12.24	6.565	.305	60
B ....12x 8....	40.0	.10	11.94	8.000	.294	60
	45.0	.10	12.06	8.042	.336	60
	50.0	.10	12.19	8.077	.371	60
B ....12x10....	53.0	.10	12.06	10.000	.345	60
	58.0	.10	12.19	10.014	.359	60
	64.0	.10	12.31	10.060	.405	60
B ....12x12....	65.0	.10	12.12	12.000	.390	60
	72.0	.10	12.25	12.040	.430	60
	79.0	.10	12.38	12.080	.470	60
	85.0	.10	12.50	12.105	.495	N.Y.
	99.0	.10	12.75	12.190	.580	N.Y.
	106.0	.10	12.88	12.230	.620	N.Y.
B ....14x 6¾..	30.0	.05	13.86	6.733	.270	60
	34.0	.05	14.00	6.750	.287	60
	38.0	.05	14.12	6.776	.313	60
	42.0	.05	14.24	6.801	.338	60
B ....14x 8....	43.0	.10	13.68	8.000	.308	60
	48.0	.10	13.81	8.031	.339	60
	53.0	.10	13.94	8.062	.370	N.Y.
	58.0	.10	14.06	8.098	.406	60

(Continued)

5 feet and longer cut without charge. Under 5 feet see extras in back of book.



WIDE FLANGE STRUCTURAL AND H SECTIONS—(Cont'd)



A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch.

	Section & Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Depth of Section	Width of Flange	Thickness of Web	Stock Lgths., Ft.
	(Continued)						
B	14x10	61.0	.10	13.91	10.000	.378	60
		68.0	.10	14.06	10.040	.418	N.Y.
		74.0	.10	14.19	10.072	.450	N.Y.
B	14x12	78.0	.10	14.06	12.000	.428	60
B	14x14½	73.0	.10	13.636	14.586	.506	60
		87.0	.10	14.00	14.500	.420	60
		95.0	.10	14.12	14.545	.465	N.Y.
B	16x 7	36.0	.05	15.85	6.992	.299	60
		40.0	.05	16.00	7.000	.307	60
		45.0	.05	16.12	7.039	.346	60
		50.0	.05	16.25	7.073	.380	60
B	16x 8½	58.0	.05	15.86	8.464	.407	60
		64.0	.05	16.00	8.500	.443	N.Y.
		71.0	.05	16.16	8.543	.486	60
B	16x11½	88.0	.10	16.16	11.502	.504	60
		105.0	.10	16.48	11.582	.584	N.Y.
B	18x 7½	47.0	.15	17.90	7.492	.350	60
		50.0	.15	18.00	7.500	.358	60
		55.0	.15	18.12	7.532	.390	60
B	18x 8¾	64.0	.15	17.87	8.715	.403	60
		70.0	.15	18.00	8.750	.438	N.Y.
		77.0	.15	18.16	8.787	.475	60
		85.0	.15	18.32	8.838	.526	N.Y.
B	18x11¾	96.0	.15	18.16	11.750	.512	60
B	21x 8¼	59.0	.15	20.91	8.230	.390	60
		63.0	.15	21.00	8.250	.410	N.Y.
		68.0	.15	21.13	8.270	.430	60
		73.0	.15	21.24	8.295	.455	60
B	21x 9	82.0	.15	20.86	8.962	.499	60
		103.0	.15	21.29	9.071	.608	60
B	21x13	112.0	.15	21.00	13.000	.527	60
B	24x 9	74.0	.15	23.87	8.975	.430	60
		80.0	.15	24.00	9.000	.455	N.Y.
		87.0	.15	24.16	9.025	.480	60
		94.0	.15	24.29	9.061	.516	N.Y.
B	24x12	100.0	.15	24.00	12.000	.468	60
		110.0	.15	24.16	12.042	.510	60
		120.0	.15	24.31	12.088	.556	60
B	27x10	91.0	.15	26.84	9.983	.483	60
		106.0	.15	27.14	10.035	.535	60
B	30x10½	108.0	.15	29.82	10.484	.548	60
		124.0	.15	30.16	10.521	.585	60
B	36x16½	230.0	.20	35.88	16.475	.765	N.Y.

5 feet and longer cut without charge. Under 5 feet see extras in back of book.

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H. F. Haz
J. J. Colli
W. H. Bas
C. H. Terr
R. G. Spa
C. R. Hire

SHIPPING
W. J. Win
R. J. Youn
H. A. Wal
H. C. Burr

COLD FINI
F. W. Eich
W. H. Bas

TUBULAR
F. W. Eich
J. J Collin

For EM

H. F. HA
W. J. WI

CHANNELS—BAR SIZES

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Size in Inches	Weight, Lbs. Per Ft.	Weight, Lbs. of 20′ Bar	Net Extra for Size	Stock Lengths Ft.
½x 11/16x7/64	.26	5.20	2.50	20
½x ¼x3/32	.25	5.00	3.00	N.Y. 20
½x ¼x⅛	.28	5.60	2.50	20
⅝x 5/16x⅛	.41	8.20	1.70	18,20,22
*¾x 5/16x.065	.30	6.00	1.00	N.Y. 20
¾x 5/16x⅛	.50	10.00	.60	20
¾x 11/32x3/32	.46	9.20	1.00	Chgo. 20
¾x ⅜xNo. 15	.40	8.00	1.00	Chgo. 20
¾x ⅜x⅛	.54	10.80	.60	18,20,22
⅞x ⅜x7/64	.57	11.40	.80	20,22
⅞x ⅜x⅛	.61	12.20	.60	20
⅞x 7/16x⅛	.69	13.80	.60	18
1 x ⅜x⅛	.68	13.60	.50	18,20,22
*1 x ⅜x.079	.41	8.20	1.00	N.Y. 20
1 x ½x⅛	.80	16.00	.50	18,20,22
1⅛x 9/16x3/16	1.16	23.20	.40	20
1¼x 7/16x⅛	.92	18.40	.50	20,22
1¼x ½x⅛	1.00	20.00	.50	18,20
1¼x ½x3/16	1.18	23.60	.40	20
*1½x ⅜x.09	.85	17.00	.50	N.Y. 20
1½x ½x⅛	1.04	20.80	.40	18,20,22
1½x ½x3/16	1.36	27.20	.25	N.Y. 20
1½x 9/16x3/16	1.44	28.80	.25	20
1½x 9/16x¼	1.68	33.60	.25	N.Y.-20, Ch. 25
1½x ¾x⅛	1.17	23.40	.40	20,22
1½x1½x3/16	2.65	53.00	.40	20,22
1¾x 7/16x⅛	1.18	23.60	.40	Bost. 22
1¾x ½x3/16	1.55	31.00	.25	20,22
2 x ½x⅛	1.34	26.80	.40	18,20,22
2 x ½x⅛	1.47	29.40	.40	20,22
2 x 9/16x3/16	1.76	35.20	.25	N.Y. 20
2 x ⅝x3/16	1.98	39.60	.25	20,22
2 x ⅝x¼	2.18	43.72	.25	20,22
2 x1 x⅛	1.78	35.60	.40	20
2 x1 x3/16	2.57	51.40	.25	20,22
2⅜x1 7/16x¼	3.87	77.40	.50	20
2½x ⅝x3/16	2.27	45.40	.25	20,22
2½x 11/16x¼	2.80	56.00	.25	N.Y. 20

* These sections carried only in high carbon.

CHANNELS—GALVANIZED

Hot Dip Galvanized with prime virgin zinc to A.S.T.M. Specification A-123-33; subjected to the Preece Test—A-90-39. Average coating not less than 2 ounces per square foot of surface.

Size in Inches	Approx. Wt. per Ft., Lbs.	Net Size Extra	Stock Lgths., Ft.
½x ¼x⅛	.30	2.50	20
⅝x 5/16x⅛	.43	1.70	20
¾x 5/16x⅛	.53	.60	20
¾x ⅜x⅛	.59	.60	20
⅞x ⅜x⅛	.64	.60	20
⅞x 7/16x⅛	.72	.60	20
1 x ⅜x⅛	.72	.50	20
1 x ½x⅛	.83	.50	20
1⅛x 9/16x3/16	1.22	.40	20
1¼x 7/16x⅛	.97	.50	20
1¼x ½x⅛	1.04	.50	20
1¼x ½x3/16	1.24	.40	20
1½x ½x⅛	1.09	.40	20
1½x ½x 11/16	1.39	.25	20
1½x 9/16x3/16	1.51	.25	20
1½x ¾x⅛	1.23	.40	20
1½x1½x3/16	2.78	.40	20
1¾x ½x3/16	1.63	.25	20
2 x ½x⅛	1.40	.40	20
2 x ⅝x¼	2.29	.25	20
2 x1 x⅛	1.87	.40	20
2 x1 x3/16	2.44	.25	20
2½x ⅝x3/16	2.38	.25	20

Extras for galvanizing vary and are subject to quotation. Other stock size channels can be galvanized quickly.

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CHANNELS—STRUCTURAL

A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch.

Depth of Channel Inches	Weight Per Ft. Lbs.	Thickness of Web	Width of Flange Inches	Net Extra for Size	Stock Lengths Ft.
3	4.1	0.170	1.410	Base	50
	5.0	0.258	1.498	"	50
	6.0	0.356	1.596	"	50
4	5.4	0.180	1.580	"	50
	6.25	0.247	1.647	"	50
	7.25	0.320	1.720	"	50
5	6.7	0.190	1.750	"	60
	9.0	0.325	1.885	"	60
	11.5	0.472	2.032	"	60
6	8.2	0.200	1.920	"	60
	10.5	0.314	2.034	"	60
	13.0	0.437	2.157	"	60
	15.5	0.559	2.279	"	60
7	9.8	0.210	2.090	"	60
	12.25	0.314	2.194	"	60
	14.75	0.419	2.299	"	60
	17.25	0.524	2.404	"	60
	19.75	0.629	2.509	"	60
8	11.5	0.220	2.260	"	60
	13.75	0.303	2.343	"	60
	16.25	0.395	2.435	"	60
	18.75	0.487	2.527	"	60
	21.25	0.579	2.619	"	60
9	13.4	0.230	2.430	"	60
	15.0	0.285	2.485	"	60
	20.0	0.452	2.652	"	60
	25.0	0.612	2.812	"	60
10	6.5	0.150	1.125	Special	50
	8.4	0.170	1.500	"	40
	15.3	0.240	2.600	Base	60
	20.0	0.379	2.739	"	60
	25.0	0.526	2.886	"	60
	30.0	0.673	3.033	"	60
	35.0	0.820	3.180	"	60
12	10.6	0.1875	1.500	Special	40
	20.7	0.280	2.940	Base	60
	25.0	0.387	3.047	"	60
	30.0	0.510	3.170	"	60
	35.0	0.636	3.296	"	60
	40.0	0.755	3.415	"	60
13	31.8	0.375	4.000	"	60
15	33.9	0.400	3.400	"	60
	35.0	0.422	3.422	"	Clev. 60
	40.0	0.520	3.520	"	60
	45.0	0.618	3.620	"	60
	50.0	0.716	3.716	"	60
	55.0	0.818	3.818	"	60
18	45.8	0.500	4.000	10	60
	58.0	0.700	4.200	10	60

5 feet or longer cut without charge. Under 5 feet see extras in back of book.

CHANNELS—INLAND HI-STEEL

See Hi-Steel Section.

SHIP CHANNELS

A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch.

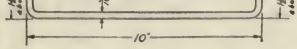
Depth of Channel Inches	Wt. Per Ft. Lbs.	Thickness of Web Inches	Width of Flange Inches	Net Extra for Size	Stock Lengths, Ft.
6	12.0	.313	2.50	Base	40
	15.3	.340	3.50	"	60
	16.3	.375	3.00	"	40
	18.0	.375	3.50	"	40
	20.0	.475	3.60	"	60
7	15.6	.313	3.313	"	Chgo. 60
	17.6	.375	3.00	"	60
	19.1	.350	3.45	"	60
	20.3	.400	3.50	"	60
	25.0	.600	3.700	"	Chgo. 40
8	18.7	.350	2.975	"	60
	19.3	.375	3.00	"	60
	21.4	.375	3.45	"	60
	21.5	.415	3.415	"	Chgo. 60
	22.8	.425	3.50	"	60
9	25.4	.450	3.50	"	60
	28.5	.550	3.60	"	N.Y. 60
	28.6	.450	3.80	"	40
	34.7	.675	4.20	"	60
10	21.9	.325	3.45	"	60
	24.9	.375	3.40	"	Buff. 60
	26.6	.425	3.45	"	60
	28.5	.425	3.95	"	60
	30.2	.475	4.00	"	60
12	32.9	.500	3.50	"	60
	34.5	.475	3.95	"	N.Y. 60
	35.0	.467	3.767	"	Clev. 60
	36.5	.525	4.00	"	60

CAR BUILDING CHANNELS

Depth of Channel Inches	Wt. Per Ft. Lbs.	Thickness of Web Inches	Width of Flange Inches	Net Extra for Size	Stock Lgths., Ft.
3	5.8	.180	1.805	Base	60
	7.1	.313	1.938	"	60
4	13.8	.500	2.500	.10	60
7	18.8	.350	4.000	.15	40
13	31.8	.375	4.000	Base	60
	37.0	.492	4.117	"	60
	50.0	.787	4.412	"	N.Y. 60
18	42.7	.450	3.950	.10	60
	45.8	.500	4.000	.10	60
	58.0	.700	4.200	.10	60

5 feet or longer cut without charge. Under 5 feet see extras in back of book.

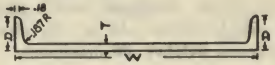
PRESSED STEEL STAIR STRINGERS



We can furnish Pressed Steel Channel Stair Stringers made of $\frac{3}{16}$" or $\frac{1}{4}$" steel, where outside rounded corners are preferred. Stringers can be made in any web desired and in lengths up to 18 feet.

LIGHT WEIGHT STEEL STAIR STRINGERS

A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch.



These light weight, hot rolled channels are especially made for stair stringers although useful for other purposes where a wide web channel with lightness is required. These channels are straight, neat appearing and offer an excellent substitute for heavier structural sections.

Web Width Inches	Wt. Per Ft. Lbs.	Thickness of Web	Width of Flange Inches	Net Extra for Size	Stock Lgths., Ft.
10	6.5	.150	1.125	Spec.	50
10	8.4	.170	1.50	"	40
12	10.6	.190	1.50	"	40

ROLLED STEEL JOISTS

(J. & L. Junior Beams)

Size in Inches	Wt. Per Ft. Lbs.	Width of Flange	Thick. of Web	Net Extra for Size	Stock Lgths., Ft.	Area Sq. Inches	Radius of Gyration Vert. Axis	Radius of Gyration Horiz. Axis
6	4.4	1.844	.114	Base	36	1.30	.36	2.37
7	5.5	2.078	.126	"	Det.	1.61	.39	2.74
8	6.5	2.281	.135	"	42	1.92	.42	3.12
9	7.5	2.375	.145	"	40	2.20	.42	3.45
10	9.0	2.688	.155	"	Det.	2.64	.48	3.85
11	10.3	2.844	.165	"	Det.	3.01	.50	4.20

SQUARE ROOT ANGLES

Right angle, free from fillet.

Angles 2" x 2" x $\frac{3}{16}$" and larger—A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch; smaller—O. H. Steel, Carbon .15 to .20, Manganese .30 to .60, Phosphorus .045 maximum, Sulphur .05 maximum.

Size in Inches	Weight, Lbs. Per Ft.	Weight, Lbs. of 20' Bar	Net Extra for Size	Stock Lgths., Ft.	In Stock At
¾x ¾x⅛	0.59	11.80	.95	20	Chgo.
1 x1 x⅛	0.80	16.00	.30	20,22	Phil.
1¼x1¼x⅛	1.01	20.20	.30	20	Phil.
$\frac{3}{16}$	1.48	29.60	.60	20	Phil.
1½x1½x⅛	1.23	24.60	.25	20	Phil.
$\frac{3}{16}$	1.80	36.00	.50	20	N.Y.
¼	2.34	46.80	.50	20	N.Y. 20
1¾x1¾x$\frac{3}{16}$	2.12	42.40	.50	20	Chgo.
2 x2 x$\frac{3}{16}$	2.44	48.80	.50	20	Chgo.-Cinc.
¼	3.19	63.80	.50	20	N.Y. 20

Plates 25
Hi-Steel 37
H. R. Bars & Strip 39
Cold Fin. Bars 65
Alloys 89
eat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babb' 203
Ro 21
Bo Re 2
Data 243

ANGLES—BAR SIZES

Angles 2"x2"x$\frac{3}{16}$" and larger—A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch; smaller—O. H. Steel, Carbon .15 to .20, Manganese .30 to .60, Phosphorus .045 maximum, Sulphur .05 maximum.

Size in Inches	Weight, Lbs. Per Ft.	Weight, Lbs. of 20' Bar	Net Extra for Size	Stock Lgths., Ft.
½x ½x⅛	.38	7.60	2.20	20,22
⅝x ⅝x⅛	.48	9.60	1.50	20,22
¾x ¾x⅛	.59	11.80	.60	20,22
	.84	16.80	.45	20
⅞x ⅞x⅛	.70	14.00	.40	20,22
	1.00	20.00	.35	Bost. 22
1 x ⅝x⅛	.64	12.80	.60	20,22
1 x ¾x⅛	.70	14.00	.60	20,22
1 x1 x⅛	.80	16.00	.30	16,18,20,22,30
	1.16	23.20	.25	20,22,30
	1.49	29.80	.25	20,22
1⅛x1⅛x⅛	.91	18.20	.30	20,22
1¼x1¼x⅛	1.01	20.20	.30	18,20,22,25,30
	1.48	29.60	.25	18,20,22,24,25,30,40
	1.92	38.40	.25	20,22
1⅜x ⅞x⅛	.91	18.20	.40	16,20,22
	1.32	26.40	.35	20
1½x1¼x$\frac{3}{16}$	1.64	32.80	.25	20, N.Y. 40
	2.13	42.60	.25	20, N.Y. 40
1½x1½x⅛	1.23	24.60	.25	18,20,22,25,30
	1.80	36.00	.15	18,20,22,25,30,60
	2.34	46.80	.15	20,22,25,30,60
	2.86	57.20	.15	20,22,60
	3.35	67.00	.15	20,22,60
1¾x ⅞x⅛	.91	18.20	.40	N.Y. 40
1¾x1¼x⅛	1.23	24.60	.30	20,22
	2.34	46.80	.25	20,22
1¾x1¾x⅛	1.44	28.80	.25	12,20,22 N.Y. 40
	2.12	42.40	.15	20,22,25
	2.77	55.40	.15	20,22,25
	3.39	67.80	.15	20,22
2 x1 x⅛	1.23	24.60	.40	20
	1.80	36.00	.30	20
2 x1¼x$\frac{3}{16}$	1.96	39.20	.25	20,22
	2.55	51.00	.25	20,22
2 x1½x⅛	1.44	28.80	.25	20,22
	2.12	42.40	.15	20,22,30
	2.77	55.40	.15	20,22,30
	3.39	67.80	.15	20
	3.99	79.80	.15	20
2 x2 x⅛	1.65	33.00	.25	20,22,25,30
	2.44	48.80	.15	18,20,22,25,40,60
	3.19	63.80	.15	18,20,22,25,40,60
	3.92	78.40	.15	20,22,40,60
	4.70	94.00	.15	20,22,40,60
	6.00	120.00	.15	20,22,40,60

(Continued)

Cutting to special lengths, see extras in back of book.

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CUSTOMER
H. F. Haze
J. J. Collin
W. H. Bas
C. H. Terr
R. G. Span
C. R. Hires

SHIPPING
W. J. Win
R. J. Youn
H. A. Wal
H. C. Burn

COLD FINIS
F. W. Eichi
W. H. Bas

TUBULAR
F. W. Eichi
J. J Collin

For **EM**

H. F. HA
W. J. WI

ANGLES—BAR SIZES

Size in Inches	Weight, Lbs. Per Ft.	Weight, Lbs. of 20' Bar	Net Extra for Size	Stock Lengths Ft.
(Continued)				
2¼x1½x3/16	2.28	45.60	.15	20
1/4	2.98	59.60	.20	N.Y. 20
2¼x2¼x1/8	1.86	37.20	.25	20,22
3/16	2.75	55.00	.15	20,22,40
1/4	3.62	72.40	.15	20,22
5/16	4.50	90.00	.15	20
3/8	5.30	106.00	.15	Chgo. 40
2½x1½x1/8	1.65	33.00	.25	20
3/16	2.44	48.80	.20	20,22,24
1/4	3.19	63.80	.20	16,20,22
5/16	3.92	78.40	.20	20
2½x2 x1/8	1.86	37.20	.25	20,22
3/16	2.75	55.00	.15	20,22,40,60
1/4	3.62	72.40	.15	20,22,40,60
5/16	4.50	90.00	.15	20,22,40,60
3/8	5.30	106.00	.15	20,22,23'6",26,40,60
1/2	6.74	134.80	.15	20,22
2½x2½x1/8	2.08	41.60	.25	20,22
3/16	3.07	61.40	.15	20,22,40,60
1/4	4.10	82.00	.15	20,22,25,40,60
5/16	5.00	100.00	.15	20,22,25,40,60
3/8	5.90	118.00	.15	20,22,25,40,60
1/2	7.70	154.00	.15	20,22,40,60
3 x2 x3/16				See Angles, Structural
3 x3 x1/8				See Angles, Structural
3/16				See Angles, Structural

Cutting to special lengths, see extras in back of book.

ANGLES—HOT ROLLED PICKLED & OILED

All sizes of Hot Rolled Angles shown in stock can be pickled and oiled promptly.

ANGLES—COLD DRAWN

See Cold Finished Bar Section

ANGLES—INLAND HI-STEEL

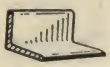
See Hi-Steel Section

GALVANIZING

We have excellent facilities for quickly galvanizing by the hot dip process practically all steel sections listed in this stock list and can electro-galvanize rivets, bolts, and small steel sections.

We use nothing but the highest grade virgin spelter in the galvanizing process. The coating is adherent and smooth, resulting in a surface free from uncoated spots. Average coating is not less than 2 ounces per sq. ft. of actual surface.

Plates 25
Hi-Steel 37
H. R. Bars & Strip 39
Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babb' 203
Ro 21
Ba Re 2
Data 243



ANGLES—STRUCTURAL

A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths Ft.
For smaller sizes—See Angles, Bar Sizes			
3 x2 x 3/16	3.07	.35	40
1/4	4.1	Base	60
5/16	5.0	"	60
3/8	5.9	"	60
1/2	7.7	"	60
3 x2 1/2 x 3/16	3.4	.35	N.Y. 40
1/4	4.5	Base	60
5/16	5.6	"	60
3/8	6.6	"	60
1/2	8.5	"	60
3 x3 x 3/16	2.5	.75	40
3/16	3.71	.35	40
1/4	4.9	Base	60
5/16	6.1	"	60
3/8	7.2	"	60
7/16	8.3	"	60
1/2	9.4	"	60
5/8	11.5	"	60
3 1/2 x2 x 3/16	3.39	.35	Det. 40
3 1/2 x2 1/2 x 1/4	4.9	Base	60
5/16	6.1	"	60
3/8	7.2	"	60
1/2	9.4	"	60
5/8	11.5	"	N.Y. 40
3 1/2 x3 x 1/4	5.4	"	60
5/16	6.6	"	60
3/8	7.9	"	60
1/2	10.2	"	60
3 1/2 x3 1/2 x 1/4	5.8	"	60
5/16	7.2	"	60
3/8	8.5	"	60
7/16	9.8	"	N.Y. 40
1/2	11.1	"	60
5/8	13.6	"	60
3/4	16.0	"	60
4 x3 x 1/4	5.8	.15	60
5/16	7.2	Base	60
3/8	8.5	"	60
7/16	9.8	"	N.Y. 40
1/2	11.1	"	60
5/8	13.6	"	60
3/4	16.0	"	60
4 x3 1/2 x 1/4	6.2	.15	N.Y. 40
5/16	7.7	Base	60
3/8	9.1	"	60
7/16	10.6	"	N.Y. 40
1/2	11.9	"	60
4 x4 x 1/4	6.6	.15	60
5/16	8.2	Base	60
3/8	9.8	"	60
7/16	11.3	"	60

(Continued)

5 feet or longer cut without charge. Under 5 feet, see extras in back of book.

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TUBULAR
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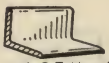
For **EM**
H. F. HA
W. J. WI



ANGLES—STRUCTURAL

A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths Ft.
(Continued)			
4 x4 x½	12.8	Base	60
5/8	15.7	"	60
¾	18.5	"	60
4½x3 x⅜	9.1	"	N.Y. 40
5 x3 x¼	6.6	15	40
5/16	8.2	Base	60
⅜	9.8	"	60
7/16	11.3	"	N.Y. 40
½	12.8	"	60
5/8	15.7	"	60
¾	18.5	"	N.Y. 40
5 x3½x5/16	8.7	"	60
⅜	10.4	"	60
7/16	12.0	"	N.Y. 40
½	13.6	"	60
5/8	16.8	"	60
¾	19.8	"	40
5 x4 x5/16	9.3	10	N.Y. 40
⅜	11.0	Base	60
½	14.5	"	60
¾	21.1	"	Chgo. 40
5 x5 x5/16	10.3	10	60
⅜	12.3	Base	60
½	16.2	"	60
5/8	20.0	"	60
¾	23.6	"	60
1	30.6	"	40
6 x3½x5/16	9.8	10	60
⅜	11.7	Base	60
7/16	13.5	"	60
½	15.3	"	60
5/8	18.9	"	60
¾	22.4	"	60
6 x4 x5/16	10.3	10	60
⅜	12.3	Base	60
7/16	14.3	"	60
½	16.2	"	60
5/8	20.0	"	60
¾	23.6	"	60
7/8	27.2	"	60
1	30.6	"	Chgo. 40
6 x6 x5/16	12.5	10	60
⅜	14.9	Base	60
7/16	17.2	"	N.Y. 40
½	19.6	"	60
9/16	21.9	"	Det. 60
5/8	24.2	"	60
¾	28.7	"	60
7/8	33.1	"	60
1	37.4	"	60
7 x3½x⅜	13.0	10	Chgo. 40
½	17.0	10	Chgo. 40
5/8	21.0	10	Clev. 60

(Continued)

5 feet or longer cut without charge. Under 5 feet, see extras in back of book.

Plates 25
Hi-Steel 37
H. R. Bars & Strip 39
Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babb' 203
Ror 21
Ba Re 2
Data 243
C

ANGLES—STRUCTURAL

A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch.

Size In Inches			Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths Ft.
(Continued)					
7	x4	x3/8	13.6	.10	60
		7/16	15.7	.10	N.Y. 40
		1/2	17.9	.10	60
		5/8	22.0	.10	N.Y. 40
		3/4	26.2	.10	Det. 60
8	x4	x7/16	17.2	.10	60
		1/2	19.6	.10	60
		5/8	24.2	.10	60
		3/4	28.7	.10	60
8	x6	x7/16	20.2	.10	60
		1/2	23.0	.10	60
		5/8	28.5	.10	60
		3/4	33.8	.10	60
		1	44.2	.10	Clev. 60
8	x8	x1/2	26.4	.10	60
		5/8	32.7	.10	60
		3/4	38.9	.10	60
		7/8	45.0	.10	60
		1	51.0	.10	60
		1 1/8	56.9	.10	60

5 feet or longer cut without charge. Under 5 feet, see extras in back of book.

BULB ANGLES

Manufacturers' Standard Class A

Specifications—A.S.T.M.—A-7-39

Inspected and stamped by American Bureau of Shipping

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	In Stock At
5x2-1/2	8.5	.30	60	Phil.
5x2-1/2	9.8	.30	60	Phil.
5x2-1/2	10.2	.30	60	Phil.
6x3	10.1	.30	60	Phil.
6x3	13.2	.30	60	Phil.
6x3-1/2	13.9	.30	60	N.Y.
7x3	12.9	.30	60	Phil.
7x3	16.4	.30	60	Phil.
7x3-1/2	13.6	.30	60	Phil.
7x3-1/2	17.1	.30	60	Phil.
8x3-1/2	16.0	.30	60	Phil.
8x3-1/2	20.0	.30	60	Phil.
9x3-1/2	21.6	.30	60	N.Y.
10x3-1/2	22.4	.30	60	Phil.
10x3-1/2	27.2	.30	60	Phil.
10x3-1/2	32.3	.30	60	N.Y.

ANGLES—GALVANIZED

Hot Dip Galvanized with prime virgin zinc to A.S.T.M. Specification A-123-33; subjected to the Preece Test—A-90-39. Average coating not less than 2 ounces per square foot of surface.

Size in Inches	Approx. Weight, Lbs. Per Ft.	Approx. Weight, Lbs. of 20' Bar	Net Extra for Size	Stock Lengths Ft.
½x ½x⅛	.40	8.00	2.20	20
⅝x ⅝x⅛	.50	10.00	1.50	20
¾x ¾x⅛	.62	12.40	.60	20
	3/16 .87	17.40	.45	20
1 x ⅝x⅛	.67	13.40	.60	20
1 x1 x⅛	.84	16.80	.30	20
	3/16 1.22	24.40	.25	20
	¼ 1.56	31.20	.25	20
1⅛x1⅛x⅛	.97	19.40	.30	20
1¼x1¼x⅛	1.06	21.20	.30	20
	3/16 1.55	31.00	.25	20
	¼ 2.02	40.40	.25	20
1⅜x ⅞x⅛	.96	19.20	.40	20
1½x1½x⅛	1.29	25.80	.25	20
	3/16 1.89	37.80	.15	20
	¼ 2.46	49.20	.15	20
1¾x1¾x⅛	1.51	30.20	.25	20
	3/16 2.23	44.60	.15	20
	¼ 2.91	58.20	.15	20
2 x1 x⅛	1.29	25.80	.40	20
	3/16 1.89	37.80	.30	20
2 x1½x3/16	2.23	44.60	.15	20
	¼ 2.91	58.20	.15	20
2 x2 x⅛	1.73	34.60	.25	20
	3/16 2.56	51.20	.15	20
	¼ 3.35	67.00	.15	20
2½x1½x3/16	2.56	51.20	.20	20
	¼ 3.35	67.00	.20	20
2½x2 x¼	3.80	76.00	.15	20
2½x2½x⅛	2.18	43.60	.25	20
	3/16 3.22	64.40	.15	20
	¼ 4.26	85.20	.15	20

Extras for galvanizing vary and are subject to quotation. Sizes not listed can be galvanized to order.

TEES—BAR SIZES GALVANIZED

O. H. Steel—Carbon .15 to .20

Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Shipped from our Chicago Plant

Hot Dip Galvanized with prime Virgin zinc to A.S.T.M. Specification A-123-33; subjected to the Preece Test—A-90-39. Average coating not less than 2 ounces per square foot of surface.

Flange Inches	Stem Inches	Stem Thickness Inches	Weight, Lbs. Per Ft.	Weight, Lbs. of 20' Bar	Net Extra for Size	Stock Lengths Ft.
1	1	⅛	.945	18.90	.70	20
1¼	1¼	3/16	1.628	32.55	.55	20

The extras for galvanizing vary and are subject to quotation. Sizes other than those listed can be promptly galvanized.

Plates 25
Hi-Steel 37
H. R. Bars & Strip 39
Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Bbt. Tub Babb 203
Ro 21
Bo Re 2
Data 243

TEES—BAR SIZES

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Tees 2"x2"x¼" and heavier are A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch.

Specify tees by flange first, then stem and thickness.

Size of Flange Inches	Stem Inches	Stem Thickness Inches	Weight, Lbs. Per Ft.	Weight, Lbs. of 20' Bar	Net Extra for Size	Stock Lengths Ft.
¾	¾	⅛	.61	12.02	1.10	20,22
⅞	⅞	⅛	.73	14.60	.90	20
1	1	⅛	.81	16.20	.70	20,22
		3/16	1.20	24.00	.55	N.Y.
1⅛	1⅛	3/16	1.37	27.40	.55	Chgo.
1¼	1¼	⅛	1.09	21.80	.70	20
		3/16	1.55	31.00	.55	20,22
		¼	1.93	38.60	.55	N.Y.
1½	1½	3/16	1.88	37.60	.30	20,22,40
		¼	2.43	48.60	.30	20,22 N.Y. 40
1¾	1¾	3/16	2.26	45.20	.30	20
		¼	2.90	58.00	.30	20,22
2	1½	¼	3.10	62.00	.30	20
2	2	¼	3.56	71.20	.30	18,20,22,40,60
		5/16	4.40	88.00	.30	20,22,40
2¼	2¼	¼	4.10	82.00	.30	20,22,40,50
		5/16	4.90	98.00	.30	Chgo.
2½	2½	¼	4.60	92.00	.30	20,22,60
		5/16	5.50	110.00	.30	18,20,22,40,60
		11/32	5.80	116.00	.30	20,25,50
		⅜	6.40	128.00	.30	20,22,40,50

Cutting to special lengths, see extras in back of book.

TEES—STRUCTURAL

A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch.

Size of Flange Inches	Stem Inches	Stem Thickness Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths Ft.
2½	3	5/16	6.1	.10	50
3	2½	5/16	6.1	.10	50
3	3	5/16	6.7	.10	50
		⅜	7.8	.10	50
3	3½	⅜	8.5	.10	N.Y. 40
3½	3	⅜	8.5	.10	50
3½	3½	⅜	9.2	.10	50
		½	11.7	.10	N.Y. 40
3½	4	⅜	9.8	.10	N.Y. 60
4	2½	⅜	8.5	.10	50
4	3	5/16	7.8	.10	N.Y. 40
		⅜	9.2	.10	50
4	4	⅜	10.5	.10	50
		½	13.5	.10	50
4	5	⅜	11.9	.10	50
		½	15.3	.10	50
4½	2½	⅜	9.2	.10	N.Y. 40
4½	3½	††	15.7	.10	Chgo. 60
5	3	⅜	11.5	.10	50
5	3⅛	½	13.6	.10	60
6½	6½	‡‡	19.8	.20	60

†† Stem thickness is 11/16"; flange thickness is 7/16".
‡‡ Flange thickness is .40; stem thickness is .40 to .55.
5 feet or longer cut without charge. Under 5 feet, see extras in back of book.

ZEES

A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Minimum tensile 60,000 lbs. per square inch.

Flange A in Inches	Depth B in Inches	Flange C in Inches	Thickness in Inches	Wt. Per Ft. Lbs.	Size & Quality Extra	Stock Lgths. Ft.
†1¼	1¾	1¾	3/16	2.8	.70	20
†1¼	1¾	2⅛	7/32	3.49	.70	N.Y. 40
†1¾	1¾	1¾	3/16	2.79	.70	Chgo. 20
2 1/16	3	2 1/16	¼	6.7	Base	60
2 1/16	3	2 11/16	⅜	9.8	"	60
2 1/16	3	2 1/16	½	12.6	"	50
2¾	3 1/16	2¾	5/16	8.5	"	60
3 1/16	4	3 1/16	¼	8.2	"	50
3⅛	4 1/16	3⅛	5/16	10.3	"	50
3⅛	4 1/16	3⅛	½	15.9	"	50
3 3/16	4⅛	3 3/16	⅜	12.5	"	50
3¼	5	3¼	⅛	11.6	"	50
3¼	5	3¼	½	17.9	"	N.Y. 60
3 5/16	5 1/16	3 5/16	⅜	14.0	"	60
3½	6	3½	⅜	15.7	"	60
3⅝	6⅛	3⅝	½	21.1	"	60

† Bar Zees—Copper Bearing Quality. Copper .20 min.; Open Hearth Steel, Carbon .15 to .20; Mang. .30 to .60; Phos. .045 max.; Sul. .05 max. Quality Extra included in above.

5 feet or longer cut without charge. Structural Zees under 5 feet and Bar Zees—see extras in back of book.

RAILS

Open Hearth New Billet Steel—A.S.C.E. Sections

Wt. Per Yard Lbs.	Section No.	Height Inches	Width of Base	Width of Head	Stock Lgths., Ft.	Track Bolts to Be Used	Track Spikes to Be Used
12	1240	2	2	1	30	½x1¾	⅜x3
16	1640	2⅜	2⅜	1 1/64	30	½x1¾	⅜x3½
20	2040	2⅝	2⅝	1 1/32	30	½x2	½x3½
25	2540	2¾	2¾	1½	30	½x2⅛	½x4
30	3040	3⅛	3⅛	1 11/16	30	⅝x2½	½x4
35	3540	3 5/16	3 5/16	1¾	30	⅝x2¾	½x4½
40	4040	3½	3½	1⅞	30	¾x2⅞	9/16x5
45	4540	3 1/16	3 1/16	2	N.Y. 30	¾x3	9/16x5½
50	5040	3⅞	3⅞	2⅛	30	¾x3⅛	9/16x5½
60	6040	4¼	4¼	2⅜	30	¾x3½	9/16x5½
70	7040	4⅝	4⅝	2 7/16	33	¾x3¾	9/16x5½
80	8040	5	5	2½	N.Y. 33	⅞x4⅛	9/16x5½
90	9040	5⅜	5⅜	2⅝	N.Y. 33	1x4½	9/16x5½
100	*10030	5 1/64	5 9/64	2 31/32	Ch. 33,39	1x4⅝	9/16x5½

* A.R.A. Sections.

SPLICES

Rail Size Lbs.	Track Bolts to Be Used	Wt. Per Pair Lbs.	Lgth. in Inches	Rail Size Lbs.	Track Bolts to Be Used	Weight Per Pair Lbs.	Lgth. in Inches
12	½x1¾	4.24	16⅛	45	¾x3	16.52	N.Y.
16	½x1¾	5.16	16⅛	50	¾x3⅛	25.38	24
20	½x2	5.69	16⅛	60	¾x3½	32.30	24
25	½x2⅛	6.56	16⅛	70	¾x3¾	54.64	34
30	⅝x2½	8.99	16⅛	80	⅞x4⅛	62.58	N.Y.
35	⅝x2¾	9.26	16⅛	90	1x4⅜	72.78	N.Y.
40	¾x3	14.26	20	100	1x4⅝	103.94	Chgo.

Plain joints for 12 lb. to 45 lb. rails are furnished complete with bolts. Angle joints without bolts are furnished for rails 50 lbs. and heavier. Weights shown include bolts. Joints used with rails 60 lbs. and under have 4 holes; 70 lbs. and over have 6 holes.

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TRACK SPIKES

200 lb. Kegs

Size in Inches	Extra for Size	In Stock At	No. Spikes Per Keg	Size in Inches	Extra for Size	In Stock At	No. Spikes Per Keg
5/16x2½	1.70	N.Y.	2200	½x4½	.25	Phil.	536
⅜x2½	1.15	N.Y.	1520	5	.25	N.Y.	490
3	.90	Phil.	1340	9/16x5	Base	Phil.	348
3½	.90	Phil.	1170	5½	"	Phil.	340
½x3	.50	N.Y.	700	⅝x5	"	N.Y.	320
3½	.50	Phil.	620	5½	"	N.Y.	280
½x4	.25	Phil.	600	6	"	N.Y.	240

TRACK BOLTS

200 lb. Kegs

Size Inches	Square Nuts Size Extra	Square Nuts No. Bolts Per Keg	* Hexagon Nuts Size Extra	* Hexagon Nuts No. Bolts Per Keg
½x1¾	1.55	1012		
2	1.35	964	..	...
2⅛	1.35	940	..	...
2¼	1.20	915	..	...
2½	1.15	870	..	...
⅝x2½	.60	505		...
3	.40	462	.65	484
¾x3	.30	285	.50	302
3¼	.20	274	.40	291
3½	Base	266	.30	281
3¾	"	257	.30	271
4	"	249	.30	262
4¼	"	242	.30	254
4½	"	235	.30	246
⅞x4	"	169	.30	177
4¼	"	167	.30	175
4⅛	"	166	.30	174
4½	"	159	.30	166
1 x4½	"	120	.30	126
4⅝	"	118	.30	123
5	"	112		

* Track Bolts with Hexagon Nuts shipped from our Chicago plant.

RAIL CLIPS

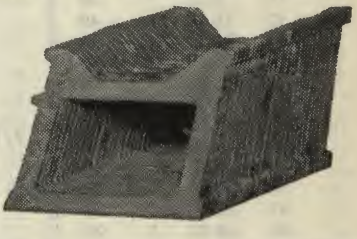
Shipped from our New York Plant

Clip No.	Clip Size in Inches	Clip Hole Inches	Clip Wt. Lbs.	Bolt Size in Inches	Bolt Wt. Lbs.	Bolt Total Wt. Lbs.	Bolt A.S.C.E. Rails, Lbs.
103	2¼x2	1 1/16x25/32	0.58	¾x2¼	0.66	1.24	55-100
114	1 11/16x1½	21/32	0.24	⅝x1¾	0.41	0.65	20-50

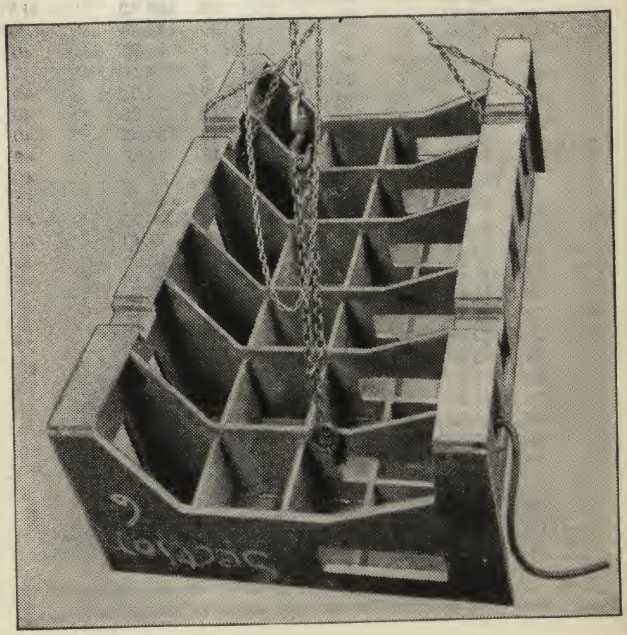
RYERSON FLAME CUTTING SERVICE

You can save time, trouble and money by using our complete flame-cutting service.

Modern burning equipment, trained operators and complete steel stocks assure quick, accurate cutting to your exact requirements in any shape, thickness or quality. Automatic equipment gives almost die-cut uniformity on production items. Single plates cut from full size sketches.



Send a blue print or sketch of any possible application. Ryerson engineers will gladly cooperate with you on special problems.



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STEEL PLATES
UNIVERSAL MILL AND SHEARED

All plates—A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Plates 2" and under, minimum tensile 60,000 lbs. per square inch.

Size in Inches	Est. Wt. Per Ft.	Net Extra for Size	Stock Lgths. Ft.
1/8x 7 to 12 Inclusive—See Hot Rolled Strip			
3/16x 7 to 12 Inclusive—See Hot Rolled Strip			
No. 7 (3/16") over 12 to 48 Incl.—See Hot Rolled Sheets			
3/16x54	34.43	.20	30
60	38.25	.20	30
72	45.90	.20	30
84	53.55	.70	30
96	61.28	.80	30
1/4x 7	5.95	Base	40
8	6.80	"	40
9	7.65	"	40
10	8.50	"	40
12	10.20	"	40
14	11.90	"	40
16	13.60	"	40
18	15.30	"	40
20	17.00	"	40
22	18.70	"	40
24	20.40	"	40
30	25.50	"	30
36	30.60	"	30
42	35.70	"	30
48	40.80	"	30
54	45.90	"	30
60	51.00	"	30
72	61.20	"	40
84	71.40	"	30
96	81.60	"	30
120	102.00	.15	N.Y.
5/16x 7	7.44	Base	40
8	8.50	"	40
9	9.56	"	40
10	10.62	"	40
12	12.75	"	40
14	14.88	"	40
16	17.00	"	40
18	19.12	"	40
20	21.25	"	40
22	23.37	"	40
24	25.52	"	40
30	31.88	"	30
36	38.25	"	30
42	44.63	"	30
48	51.00	"	30
60	63.75	"	30
72	76.50	"	40
84	89.25	"	30
96	102.00	"	30
120	127.50	.15	N.Y.

Size in Inches	Est. Wt. Per Ft.	Net Extra for Size	Stock Lgths. Ft.
3/8x 7	8.93	Base	40
8	10.20	"	40
9	11.48	"	40
10	12.75	"	40
12	15.30	"	40
14	17.85	"	40
15	19.13	"	Det.
16	20.40	"	40
18	22.95	"	40
20	25.50	"	40
22	28.05	"	40
24	30.60	"	40
30	38.25	"	30
36	45.90	"	30
42	53.55	"	30
48	61.20	"	30
54	68.85	"	30
60	76.50	"	30
72	91.80	"	40
84	107.12	"	30
96	122.40	"	30
120	153.12	.15	N.Y.
7/16x 7	10.41	Base	Chgo.
8	11.90	"	N.Y.
10	14.88	"	Chgo.
12	17.85	"	N.Y.
60	89.25	"	30
72	107.10	"	N.Y.
120	178.50	"	Det. 20
1/2x 7	11.90	Base	40
8	13.60	"	40
9	15.30	"	40
10	17.00	"	40
12	20.40	"	40
14	23.80	"	40
16	27.20	"	40
18	30.60	"	40
20	34.00	"	40
22	37.40	"	40
24	40.80	"	40
30	51.00	"	30
36	61.20	"	30
42	71.40	"	30
48	81.60	"	30
54	91.80	"	30
60	102.00	"	30
72	122.40	"	40
84	142.80	"	30
96	163.20	"	30
120	204.00	.15	N.Y.
9/16x60	114.75	Base	12
72	137.70	"	20
84	160.65	"	Buff.

(Continued)

Plates 1 inch thick and under cut to 5 feet or longer without charge. Over 1 inch thick and under 5 feet, see extras in back of book.

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H. F. Haze
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C. H. Terr
R. G. Span
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J. J Collin

For **EM**

H. F. HA
W. J. WI

STEEL PLATES
UNIVERSAL MILL AND SHEARED

All plates—A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Plates 2" and under, minimum tensile 60,000 lbs. per square inch.

Size in Inches	Est. Wt. Per Ft.	Net Size Extra	Stock Lgths., Ft.
(Continued)			
5/8x 6½	13.81	Base	20
7	14.88	"	40
8	17.00	"	40
9	19.13	"	40
10	21.25	"	40
12	25.50	"	40
14	29.75	"	40
16	34.00	"	40
18	38.25	"	40
20	42.50	"	40
22	46.75	"	40
24	51.00	"	40
30	63.75	"	30
36	76.50	"	30
48	102.00	"	30
60	127.50	"	40
72	153.00	"	N.Y.
96	204.00	"	N.Y.
3/4x 7	17.85	Base	40
8	20.40	"	40
9	22.95	"	40
10	25.50	"	40
12	30.60	"	40
14	35.70	"	40
16	40.80	"	40
18	45.90	"	40
20	51.00	"	40
22	56.10	"	40
24	61.20	"	40
36	91.80	"	30
48	122.40	"	30
60	153.00	"	40
72	183.60	"	12,30*
96	244.80	"	N.Y.
13/16x72	198.90	Base	Clev.
7/8x 7	20.83	Base	Chgo.
8	23.80	"	40
10	29.75	"	40
12	35.70	"	20
36	107.10	"	20
60	178.56	"	40
96	285.60	"	N.Y.
1 x 6½	22.10	Base	40
7	23.80	"	40
7½	25.50	"	40
8	27.20	"	40
9	30.60	"	40
10	34.00	"	40
12	40.80	"	40
14	47.60	"	40

Size in Inches	Est. Wt. Per Ft.	Net Size Extra	Stock Lgths., Ft.
1 x16	54.40	Base	40
18	61.20	"	40
20	68.00	"	40
22	74.80	"	40
24	81.60	"	40
30	102.00	"	30
36	122.40	"	30
48	163.20	"	30
60	204.00	"	30
72	244.80	"	20
96	326.40	"	N.Y.
1-1/8x60	229.50	"	30
72	275.40	"	30
1-1/4x 7	29.75	Base	40
8	34.00	"	40
9	38.25	"	Bost.
10	42.50	"	40
12	51.00	"	40
60	255.00	"	30
72	306.00	"	12
96	408.00	"	Clev.
1-3/8x60	280.49	"	30
72	336.00	"	30
1-1/2x 7	35.70	Base	40
8	40.80	"	40
10	51.00	"	40
12	61.20	"	20
60	306.00	"	30
72	367.20	"	12
96	489.60	"	Clev.
1-5/8x60	331.50	"	12
72	397.80	"	N.Y.
1-3/4x 8	47.60	Base	40
60	357.06	"	30
72	428.40	"	12
2 x 7	47.60	Base	40
8	54.40	"	40
9	61.20	"	Bost.
10	68.00	"	40
12	81.60	"	40
60	408.00	"	30
72	489.60	"	12
2-1/4x 9	68.85	.10	Chgo.
72	550.80	.30	20
96	734.40	.30	Det.
2-1/2x48	408.00	.30	15
72	612.00	.30	20
96	816.00	.30	Det.
2-3/4x72	673.20	.30	20
96	897.60	.30	Det.
			(Continued)

* This length shipped from our New York plant.

Plates 1 inch thick and under cut to 5 feet or longer without charge. Over 1 inch thick and under 5 feet, see extras in back of book.

STEEL PLATES
UNIVERSAL MILL AND SHEARED

All plates—A.S.T.M.—A-7-39 for bridges and buildings and A-131-39 for ships. Plates 2" and under, minimum tensile 60,000 lbs. per square inch.

Size in Inches	Est. Wt. Per Ft.	Net Size Extra	Stock Lgths. Ft.
3 x48	489.6	.30	15
72	734.4	.30	20
96	979.20	.30	Det.
3-1/4x72	795.6	.30	20
96	1060.80	.30	Det.
3-1/2x48	571.2	.30	15
72	856.8	.30	18
96	1142.40	.30	Det.
3-3/4x72	918.0	.30	15
96	1224.0	.30	Det.
4 x48	652.8	.30	15
72	979.2	.30	15
96	1305.60	.30	Det.
4-1/4x72	1040.4	.40	Clev.
4-1/2x72	1101.6	.40	14
5 x48	816.0	.40	15
72	1224.0	.40	12
5-1/2x72	1346.4	.40	N.Y.
6 x48	979.2	.40	15
72	1468.8	.40	10
6-1/2x56	1237.60	.40	Buff.
72	1591.20	.40	Det.
7 x60	1428.0	.40	N.Y.
8 x36	979.20	.40	N.Y.
60	1632.00	.40	Chgo.
10 x48	1632.00	.40	N.Y.

STEEL SLABS

A.S.T.M.—A-7-39

Steel slabs for column bases are cut to size with an acetylene torch. Standard specifications permit the use of slabs 4" thick and under without machining. If over 4" thick, slabs resting on masonry should be machined on the top where the column rests but need not be machined on the bottom. Slabs resting on grillage beams should be machined on both top and bottom. Slabs can be furnished cut to size, planed and drilled when required.

Size in Inches	Wt. per Square Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
2¼x48	91.80	.30	15
72	91.80	.30	20
96	91.80	.30	Det.
2½x48	102.00	.30	15
72	102.00	.30	20
96	102.00	.30	Det.
2¾x72	112.20	.30	20
96	112.20	.30	Det.
3 x48	122.40	.30	15
72	122.40	.30	20
96	122.40	.30	Det.
3¼x72	132.60	.30	20
96	132.60	.30	Det.
3½x48	142.80	.30	15
72	142.80	.30	18
96	142.80	.30	Det.
3¾x72	153.00	.30	15
96	153.00	.30	Det.
4 x48	163.20	.30	15
72	163.20	.30	15
96	163.20	.30	Det.
4¼x72	173.40	.40	Clev.
4½x72	183.60	.40	14
5 x48	204.00	.40	15
72	204.00	.40	12
5½x72	224.40	.40	N.Y.
6 x48	244.80	.40	15
72	244.80	.40	10
6½x56	265.20	.40	Buff.
72	265.20	.40	Det.
7 x60	285.60	.40	N.Y.
8 x36	326.40	.40	N.Y.
60	326.40	.40	Chgo.
10 x48	408.00	.40	N.Y.

Cutting extras in back of book.

INLAND HI-STEEL PLATES

See Hi-Steel Section

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CUSTOMER
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W. H. Bas

TUBULAR
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For EM
H. F. HA
W. J. WI

STEEL PLATES

INSPECTED AND TESTED BY THE AMERICAN BUREAU OF SHIPPING

Shipped from our New York Plant

Size in Inches	Wt. per Square Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.	Size in Inches	Wt. per Square Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
7/16x60	17.86	Base	40	5/8x72	25.50	Base	40
72	17.86	"	40	84	25.50	"	40
1/2x60	20.40	"	40	96	25.50	"	40
72	20.40	"	40	3/4x60	30.60	"	40
84	20.40	"	40	72	30.60	"	40
96	20.40	"	30	84	30.60	"	40
5/8x60	25.50	"	40	96	30.60	"	40

A.A.R. LOCOMOTIVE FIRE BOX STEEL PLATES

Tensile strength 52,000 to 62,000 lbs.

Identification Color: Green

Shipped from our Chicago Plant

Conforms to A.S.T.M.—A-30-39 and A.A.R.—Grade A—M-115-36.

Size in Inches	Wt .per Square Ft. Lbs.	Extra for Quality	Stock Lgths. Ft.
5/16x96	12.75	.60	30
3/8x96	15.30	.60	30
1/2x96	20.40	.60	30

COLD FINISHED IRON PLATES

Suitable for Magnetic Cores

Size in Inches	Wt. per Square Ft. Lbs.	Stock Lgths. Ft.	Size in Inches	Wt. per Square Ft. Lbs.	Stock Lgths. Ft.
5/16x36	12.75	10	1/2x36	20.40	10
3/8x36	15.30	10			

C—F—M PLATES

Identification Colors: Red and White

Shipped from our Chicago Plant

C—Cleanest of free machining steels.

F—High finish produced by ordinary machining.

M—Machines rapidly and easily.

Special precautions are taken in the manufacture of C-F-M plates to hold undesirable elements to a minimum. The special composition and structure developed permits fine tooling with a resulting smooth, bright surface finish. Machinability rating is high; carburizing properties are excellent; plates may be flame cut to shape with no hardening at the edges.

Use C-F-M plates for rubber and plastic molds, leather blanking dies, light duty gears and sprockets, and machine parts. Your costs of planing, broaching, milling, drilling and shaping will be reduced; your finished product will have an improved appearance. Write for complete information.

Size in Inches	Wt. per Square Ft. Lbs.	Net Size & Qual. Extra	Stock Lgths. Ft.	Size in Inches	Wt. per Square Ft. Lbs.	Net Size & Qual. Extra	Stock Lgths. Ft.
3/4x72	30.60	.50	30	1 1/2x72	61.20	.50	20
7/8x72	35.70	.50	30	2 x72	81.60	.50	15
1 x72	40.80	.50	30	2 1/2x56	102.00	.80	15
1 1/8x72	45.90	.50	25	3 x56	122.40	.80	12
1 1/4x72	51.00	.50	24				

Hi-Steel 37
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Sheets
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ABRASION RESISTING SHEETS & PLATES

Identification Color: Red

Ryerson abrasion resisting steel, a special carbon manganese steel, was developed especially for applications requiring resistance to abrasive wear. It is used in making scraper blades, grain and feed mill liners and spouts, concrete mixers, conveyors, hammer mill parts, drag line equipment, coal and gravel screens and chutes, sand, gravel, cement and clay handling machinery, pug mill knives, etc.

Ryerson abrasion steel will in most cases outlast ordinary steel by a big margin and in many cases it compares favorably with high priced alloy castings. The actual comparative life is of course dependent on the application, methods of fabrication and whether used in the natural condition or heat treated.

Abrasion resisting sheets and plates can be machined, drilled and punched. They will also withstand a certain amount of bending and forming. To make certain fabrication jobs easier, Ryerson abrasion resisting steel is made in two compositions:

"H"—Full Hardness

In "H"—full hardness Ryerson abrasion resisting steel, the carbon content is high and the manganese relatively low. This gives greater wear resistance for certain applications, but fabrication is more difficult.

"S"—Medium Hardness

In "S"—medium hardness abrasion resisting steel, the carbon content is lower and the manganese relatively higher in order to increase ductility. While this results in the sacrifice of a certain amount of wear resistance, the greater ductility is sometimes necessary for applications involving difficult fabrication.

If you will give us the details of your abrasion resisting problem we shall be glad to make recommendations on the use and fabrication of this material for your particular application.

16 ga. sheets carried in "S"—medium hardness only. All other sizes carried in stock in both "H"—full hardness and "S"—medium hardness.

Gauge and Size in Inches	Wt. per Square Ft. Lbs.	Net Size Extra	Size in Inches	Wt. per Square Ft. Lbs.	Net Size Extra
No. 16x36x 96	2.50	.90	1/4x48x360	10.20	Base
48x120	2.50	.90	72x360	10.20	"
No. 10x48x144	5.625	Base	5/16x72x360	12.75	"
48x240	5.625	"	3/8x72x360	15.30	"
60x240	5.625	.30	1/2x72x360	20.40	"
No. 7 ($\frac{3}{16}$")x			†5/8x72x360	25.50	"
48x360	7.50	.20	†3/4x60x240	30.60	"
3/16x72x360	7.65	.20	†72x240	30.60	"

Thicknesses $\frac{3}{16}$" to 3/4" inclusive are Plates.

† Must be burned to size. Furnished cut to any size or shape. Cutting charges on application.

PERFORATED PLATES

See Sheet Section

STAINLESS STEEL PLATES

See Stainless Section

O.H. COPPER ALLOY PLATES

Manufacturers' Standard Class A Specifications—55,000 to 65,000 lb. tensile strength. Minimum copper content .20. Particularly desirable for applications demanding good corrosion resistance. Costs slightly more—lasts 3 to 5 times longer than ordinary steel.

Size in Inches	Wt. per Square Ft. Lbs.	Size & Quality Extra	Stock Lgths. Ft.
No. 7 ($\frac{3}{16}$") 30 to 48— See Sheets			
3/16x54	7.65	.45	30
*60	7.65	.45	30
66	7.65	.45	30
*72	7.65	.45	30
1/4x30	10.20	.25	30
36	10.20	.25	30
42	10.20	.25	30
48	10.20	.25	30
54	10.20	.25	30
*60	10.20	.25	30
66	10.20	.25	30
*72	10.20	.25	30
5/16x30	12.75	.25	30
36	12.75	.25	30
42	12.75	.25	30
48	12.75	.25	30
54	12.75	.25	30
60	12.75	.25	30
*72	12.75	.25	25
3/8x30	15.30	.25	30
36	15.30	.25	30
42	15.30	.25	30
48	15.30	.25	30
54	15.30	.25	30
*60	15.30	.25	25
*72	15.30	.25	25
1/2x30	20.40	.25	30
36	20.40	.25	30
42	20.40	.25	30
48	20.40	.25	30
54	20.40	.25	30
*60	20.40	.25	25
*72	20.40	.25	25
5/8x30	25.50	.25	30
36	25.50	.25	30
42	25.50	.25	30
48	25.50	.25	30
60	25.50	.25	30
72	25.50	.25	30
3/4x72	183.60	.25	30

* These sizes in stock. Balance shipped from our New York and Chicago Plants.

FLANGE STEEL PLATES

A.S.M.E.—S1

Conform to A.S.T.M. A-70-39

Minimum tensile strength 55,000 lbs.

These plates meet the requirements of the Hartford Steam Boiler Inspection and Insurance Company.

Size in Inches	Wt. per Square Ft. Lbs.	Size & Quality Extra	Stock Lgths., Ft.
1/4x48	10.20	.25	30
60	10.20	.25	30
72	10.20	.25	30
84	10.20	.25	Buff.
96	10.20	.25	Buff.
120	10.20	.40	Chgo.
5/16x48	12.75	.25	30
60	12.75	.25	30
72	12.75	.25	30
84	12.75	.25	Buff.
96	12.75	.25	Buff.
120	12.75	.40	Chgo.
3/8x48	15.30	.25	30
60	15.30	.25	30
72	15.30	.25	30
84	15.30	.25	Buff.
96	15.30	.25	Buff.
120	15.30	.40	Chgo.
7/16x72	17.86	.25	30
84	17.86	.25	Chgo.
96	17.86	.25	Chgo.
120	17.86	.40	Chgo.
1/2x48	20.40	.25	N.Y.
60	20.40	.25	N.Y.
72	20.40	.25	N.Y.
84	20.40	.25	Buff.
96	20.40	.25	Buff.
120	20.40	.40	Chgo.
5/8x60	25.50	.25	Chgo.
72	25.50	.25	N.Y.
84	25.50	.25	Chgo.
96	25.50	.25	Chgo.
3/4x60	30.60	.25	Chgo.
72	30.60	.25	N.Y.
84	30.60	.25	Chgo.
96	30.60	.25	Chgo.
7/8x72	35.70	.25	N.Y.
1x60	40.80	.25	Chgo.
72	40.80	.25	N.Y.
96	40.80	.25	Chgo.
1-1/8x72	45.90	.25	Chgo.
1-1/4x72	51.00	.25	Chgo.
1-1/2x72	61.20	.25	Chgo.
1-3/4x72	71.40	.25	Chgo.

Cutting extras in back of book.

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H. R. Bars & Strip 39
Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets 12[illegible] Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babb' 203
[illegible] Ro 21
Bo Re 2[illegible]
Data 243
C[illegible]

FIRE BOX STEEL PLATES

A.S.M.E.—S1

Conform to A.S.T.M. A-70-39 Specifications

Minimum tensile strength 55,000 lbs.

These plates meet the requirements of the Hartford Steam Boiler Inspection and Insurance Company.

Size in Inches	Weight Per Sq. Ft. Lbs.	Size & Quality Extra	Stock Lgths. Ft.
1/4			
60	10.20	.60	25
72	10.20	.60	N.Y. 25
96	10.20	.60	25
120	10.20	.75	Det. 20
5/16			
60	12.75	.60	25
72	12.75	.60	N.Y.
96	12.75	.60	25
120	12.75	.75	Det. 20
3/8			
60	15.30	.60	25
72	15.30	.60	N.Y. 25
96	15.30	.60	25
120	15.30	.75	Chgo. 30
7/16			
96	17.86	.60	Chgo. 30
120	17.86	.75	Det. 20
1/2			
60	20.40	.60	25
72	20.40	.60	N.Y. 25
96	20.40	.60	25
120	20.40	.75	Chgo. 30
9/16			
72	22.96	.60	Det. 20
5/8			
72	25.50	.60	N.Y. 25
96	25.50	.60	Chgo. 30
3/4			
72	30.60	.60	Clev. 30
84	30.60	.60	Chgo. 30
1			
72	40.80	.60	Clev. 30
96	40.80	.60	Det. 20

3½% NICKEL STEEL PLATES

Hot Rolled and Annealed

Identification Colors: Blue and Aluminum

Shipped from our Chicago Plant

Conforming to U. S. Army Ordnance specification 57-114-A.

Physical properties: Minimum tensile strength, 85,000 lbs. per sq. in.; minimum yield point, 50,000 lbs. per sq. inch; minimum elongation in 2 inches, 18%; approximate Brinell Hardness, 212.

This high physical property material is quite ductile. Plates ¾" or less will bend to an angle of approximately 180° around a pin, the diameter of which is equal to the thickness of the specimen being bent.

Plates may be drilled, milled, planed, or otherwise machined without difficulty, and can be either sheared or burned. If plates are burned, the surface metal on the burned edge should be machined or ground off prior to subjecting the material to sharp bends.

Size in Inches	Wt. Per Sq. Ft. Lbs.	Net Extra for Size	Stock Lgths., Feet
3/16x72	7.65	.20	20
1/4x72	10.20	Base	20
5/16x72	12.75	"	20
3/8x72	15.30	"	20
1/2x72	20.40	Base	20
5/8x72	25.50	"	20
3/4x72	30.60	"	20
1 x72	40.80	"	20

Other than stock sizes listed above will be cut on a gross weight basis of multiples of 12" in width or 2 ft. in length.

STEEL CIRCLES AND RINGS

Circles and rings cut from any sheets or plates listed in this book. (See Flame Cutting page.)

Rough forged and rough turned rings also furnished.

ARMCO INGOT IRON PLATES

See Armco Iron in Sheet Section.

MANGANAL STEEL PLATES

Identification Colors: Red, Blue, and Green

Shipped from our Chicago Plant

Manganal is an austenitic, tough, non-magnetic steel containing 11 to 13% manganese and 2½ to 3½% nickel. It is a hard, yet ductile steel, requiring no subsequent heat treatment when hot worked and can be flame cut and welded with no loss in toughness after cooling. Under repeated hammering, it work-hardens on the surface as high as 500 Brinell.

It is used for applications where extreme toughness, strength and resistance to abrasion, wear and pounding are required, such as, wear plates, shovel buckets, crushing hammers, etc.

Manganal is also used in place of heavy castings to reduce weight, and because of its non-magnetic properties has been employed for transformer plates and other electrical parts. Descriptive bulletin or any special data desired will be furnished upon request.

Size in Inches	Wt. Per Square Ft., Lbs.	Stock Lgths., Ft.	Size in Inches	Wt. Per Square Ft., Lbs.	Stock Lgths., Ft.
3/16x48	7.65	10	5/8x48	25.50	10
1/4x48	10.20	10	3/4x48	30.60	10
3/8x48	15.30	10	1x48	40.80	10
1/2x48	20.40	10			

O. H. HIGH CARBON STEEL PLATES

(.40 to .50 Carbon)

Identification Color: Yellow

Size in Inches	Wt. per Square Ft. Lbs.	Size & Quality Extra	Stock Lgths. Ft.	Size in Inches	Wt. per Square Ft. Lbs.	Size & Quality Extra	Stock Lgths. Ft.
3/16x72	7.65	.95	30	1¾x72	71.40	.75	30
¼x72	10.20	.75	30	2 x56	81.60	.75	20
5/16x72	12.75	.75	30	2 x60	81.60	.75	20
⅜x72	15.30	.75	30	2 x72	81.60	.75	20
7/16x72	17.86	.60	Chgo.	2¼x48	91.80	1.05	20
½x60	20.40	.75	30	2¼x72	91.80	1.05	20
½x72	20.40	.75	30	2½x48	102.00	1.05	20
5/8x60	25.50	.75	20	2½x72	102.00	1.05	20
5/8x72	25.50	.75	20	2¾x72	112.20	1.05	20
¾x60	30.60	.75	20	3 x48	122.40	1.05	15
¾x72	30.60	.75	20	3 x72	122.40	1.05	15
⅞x72	35.70	.75	20	3¼x72	132.60	.70	Buff.
1 x60	40.80	.75	20	3½x72	142.80	.70	Buff.
1 x72	40.80	.75	20	3¾x72	153.00	.90	Chgo.
1⅛x72	45.90	.75	20	4 x72	163.20	1.05	15
1¼x60	51.00	.75	20	4½x72	183.60	.80	Buff.
1¼x72	51.00	.75	20	5 x72	204.00	1.15	18
1⅜x72	56.10	.60	Chgo.	5½x72	224.40	.80	Buff.
1½x60	61.20	.75	20	6 x72	244.80	1.15	15
1½x72	61.20	.75	20	7 x72	285.60	1.00	Chgo.
1⅝x72	66.30	.60	Chgo.	8 x48	326.40	1.15	12
1¾x60	71.40	.75	20				

Cutting extras in back of book.

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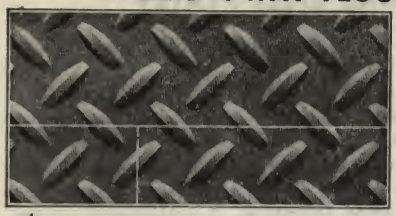
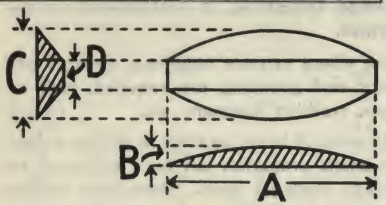
Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets 13[illegible]
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babb 203
[illegible] Ro 21
Bo Re 2[illegible]
Data 243
C[illegible]

INLAND 4-WAY FLOOR PLATES





Dimension	Light Pattern	Standard Pattern
A	.750"	1.250"
B	.040"	.095"
C	.264"	.564"
D	.125"	.2340"

Inland 4-Way Floor Plates are made from strong rolled steel. They offer maximum safety as projections center one another at right angles and give equal resistance to slip in all four directions. The pattern matches whether the plates are laid side to side or end to side resulting in easier, lower cost installations. Inland floor plates are clean and open — they sweep and drain in all directions. Plates can be bent or formed to fit each application. They are available in two patterns.

In addition to general industrial use, they are used for bridge and stair treads, platforms, aprons, etc. Write for booklet.

Standard Pattern

*Size in Inches	Wt. per Square Ft. Lbs.	Net Extra for Size	Stock Lengths Ft.
3/16x24	8.70	.20	4,6,8,10,12,20
30	8.70	.20	4,6,8,10,12,20
36	8.70	.20	4,6,8,10,12,20
42	8.70	.20	4,6,8,10,12,20
48	8.70	.20	4,6,8,10,12,20
60	8.70	.20	4,6,8,10,12,20
1/4x24	11.25	Base	4,6,8,10,12,20
30	11.25	"	4,6,8,10,12,20
36	11.25	"	4,6,8,10,12,20
42	11.25	"	4,6,8,10,12,20
48	11.25	"	4,6,8,10,12,20
60	11.25	"	4,6,8,10,12,20
72	11.25	"	4,6,8,10,12,20
5/16x24	13.80	Base	4,6,8,10,12,20
30	13.80	"	4,6,8,10,12,20
36	13.80	"	4,6,8,10,12,20
42	13.80	"	4,6,8,10,12,20
48	13.80	"	4,6,8,10,12,20
60	13.80	"	4,6,8,10,12,20
72	13.80	"	4,6,8,10,12,20
3/8x24	16.35	Base	4,6,8,10,12,20
30	16.35	"	4,6,8,10,12,20
36	16.35	"	4,6,8,10,12,20
42	16.35	"	4,6,8,10,12,20
48	16.35	"	4,6,8,10,12,20
60	16.35	"	4,6,8,10,12,20
72	16.35	"	4,6,8,10,12,20
1/2x24	21.45	Base	4,6,8,10,12,20
30	21.45	"	4,6,8,10,12,20
36	21.45	"	4,6,8,10,12,20
42	21.45	"	4,6,8,10,12,20
48	21.45	"	4,6,8,10,12,20, Clev. 30
60	21.45	"	4,6,8,10,12,20
72	21.45	"	4,6,8,10,12,20

(Continued)

* Thickness exclusive of projections.

New...

C.F.M. Plates

Free-Machining plus

Unusual Cleanliness and Smooth, Bright Finish

The new C-F-M Plates are carefully controlled during manufacture to produce an unusually clean steel, which machines freely to a smooth, bright finish with ordinary cutting. It is ideal for plastic molds or applications requiring high surface finish or fine tool work. C-F-M Plates possess splendid carburizing properties that assure a hard case and a strong supporting core. These plates lend themselves well to flame cutting . . . for they leave no hardened edges. In milling, planing, broaching, drilling or shaping operations, C-F-M Plates will improve the appearance of your product and reduce costs. Stock sizes of C-F-M Plates are shown in the Plate Section.

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H. R. Bar & Strip 39
Cold Fin Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babb' 203
Rod 21
Bo Re 2
Data 243

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CUSTOMER
H. F. Haz
J. J. Colli
W. H. Ba
C. H. Ter
R. G. Spa
C. R. Hire

SHIPPING
W. J. Wir
R. J. You
H. A. Wa
H. C. Bur

COLD FINI
F. W. Eich
W. H. Ba

TUBULAR
F. W. Eich
J. J Collir

For EM

H. F. HA
W. J. WI

Over 1500 added to R

ALLOY STEELS

S.A.E. X4130 H.T. C.F. Squares
S.A.E. X4130 H.T. C.F. Hexagons
S.A.E. X4130 Annealed Billets
S.A.E. X4340 H.R. Rounds (Electric Furnace)
S.A.E. 4615-4620 C.F. Rounds
S.A.E 4640 H.R. Rounds
S.A.E. 4815 H.R. Rounds
S.A.E. 9255 Annealed Rounds

ALLEGHENY STAINLESS

Alleg. 18-8 Sheets—No. 4 Finish—Type 304
Alleg. 18-8 Sheets—No. 2-B Finish—Type 304
Alleg. 18-8M Sheets—No. 2-B Finish—Type 316
Alleg. 18-8 Rounds—Type 304
Alleg. 18-8S Rounds—Type 304

RYERSON Ce

New Steels erson Stocks

Alleg. 18-8C Rounds—Type 347

Alleg. 18-8 Flats—Type 304

Alleg. 18-8M Spec. Hex.—Type 317

Alleg. 18-8 Atomic Hydrogen Welded Tubing

Alleg. 18-8M Stainless Seamless Pipe—Type 316

Alleg. 18-8M Spec. Stainless Seamless Pipe—Type 317

Ryex 18-8 Stainless Steel Standard Mesh

Ryex 18-8 Stainless Steel Flattened Mesh

. . . AND MANY OTHERS

Galv. Tees—Bar Size

C-F-M Plates

Cold Fin. Iron Plates

Manganal Steel Plates

Pure Iron Sheets

S.A.E. 1095 Annealed Forging Quality Rounds

S.A.E. X1314 Rounds

Turned, Ground and Polished Shafting (S.A.E. 1045, X1335)

Morton Kass Safety Tread

ified STEELS

Hi-Steel 37

H. R. Bars & Strip 39

Cold Fin. Bars 65

Alloys 89

Heat Treat. Alloys 117

Tool Steel 123

Sheets 12[illegible] Spec. Sheets 157

Stainless 167

Tubing 189

Blr. Tub Babb 203

[illegible] Ror 21

Ba Re 2[illegible]

Data 243

C[illegible]

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CUSTOMER
H. F. Haze
J. J. Collin
W. H. Bass
C. H. Terry
R. G. Span
C. R. Hires

SHIPPING
W. J. Winl
R. J. Youn
H. A. Wal
H. C. Burn

COLD FINIS
F. W. Eich
W. H. Bas

TUBULAR
F. W. Eich
J. J Collin

For **EM**

H. F. HA
W. J. WI

OVER 10,000 KINDS

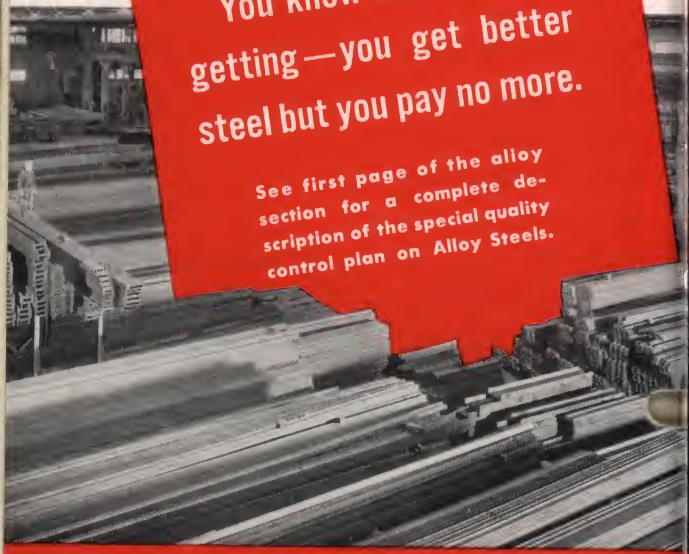
..all Certified Quality

STEEL

in Stock for Immediate Shipment

Under the Ryerson Certified plan, you get narrow range analysis, positive identification and uniform high quality. You know what you are getting—you get better steel but you pay no more.

See first page of the alloy section for a complete description of the special quality control plan on Alloy Steels.



RYERSO

INLAND 4-WAY FLOOR PLATES

Standard Pattern

*Size in Inches	Wt. Per Sq. Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.	*Size in Inches	Wt. Per Sq. Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
(Continued)							
5/8x28	26.55	Base	N.Y. 20	5/8x48	26.55	Base	N.Y. 20
30	26.55	"	N.Y. 20	54	26.55	"	N.Y. 20
36	26.55	"	N.Y. 20	60	26.55	"	N.Y. 20
42	26.55	"	N.Y. 20	72	26.55	"	N.Y. 20

* Thickness exclusive of projection.

Light Pattern †

*Gauge and Size in Inches	Wt. per Square Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
1/8x24	5.32	Spec.	4,6,8,10,12,20
30	5.32	"	4,6,8,10,12,20
36	5.32	"	4,6,8,10,12,20
42	5.32	"	4,6,8,10,12,20
48	5.32	"	4,6,8,10,12,20
No. 12x24	4.695	"	12
30	4.695	"	8,10,12,20
36	4.695	"	8,10,12,N.Y. 20
42	4.695	"	12
48	4.695	"	8,10,12,20
60	4.695	"	8,10,12,20
No. 14x24	3.445	"	8,12
30	3.445	"	8,12
36	3.445	"	8,12
42	3.445	"	N.Y. 12
48	3.445	"	16
No. 16x24	2.820	"	8
30	2.820	"	8
36	2.820	"	8,12

†Light Pattern Plates, No. 12 Gauge and lighter, are sold on the gross weight of above stock sizes and cutting extras will be the same as Hot Rolled sheets.

*Thickness exclusive of projection.

Light Pattern—Galvanized

*Gauge and Size in Inches	App. Wt. Per Sq. Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.	*Gauge and Size in Inches	App. Wt. Per Sq. Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
No. 16x36	2.961	Spec.	12	No. 12x36	4.930	Spec.	12

* Thickness exclusive of projection.

HOT ROLLED, PICKLED & OILED PLATES

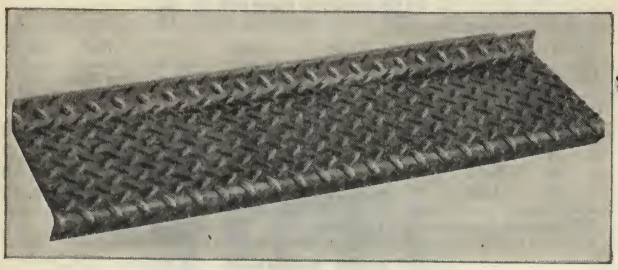
Shipped from our New York Plant

Smooth, clean, free from scale. Suitable for Jigs, Fixtures and Pattern Work.

Ga. and Size in Inches	Wt. Per Square Ft. Lbs.	Stock Lgths. Ft.	Size in Inches	Wt. Per Square Ft. Lbs.	Stock Lgths. Ft.
For lighter weights — see Hot Rolled, Pickled and Oiled Strip.			5/16x48	12.75	12
No. 7 ($\frac{3}{16}$")x48	7.50	12	3/8x48	15.30	12
1/4x48	10.20	12	1/2x48	20.40	12

Thicknesses ¼" to ½" inclusive are Plates.

STEEL STAIR TREADS AND PLATFORMS



Treads and landings made from Inland 4-Way Floor Plates give additional safety, rigidity and long life. Treads are formed with a nosing to give a neat appearance. They are furnished either with or without a short riser. All treads are made to specification for use in either straight or winding stairways.

TRAFFIC PLATES

Inland 4-Way Traffic Plates provide a safe, non-slip, durable covering for traffic lanes on bridge floors. Their quick drainage feature is particularly advantageous in bridge installations, as it prevents ice formation.

Traffic Plates are made of $\frac{3}{16}$" or $\frac{1}{4}$" Inland 4-Way Floor Plates and usually vary in widths from 20" to 36". They are punched, or punched and countersunk on all four edges with bolt or screw holes spaced at about 14" to 16" centers. Lag screws and bolts can be furnished when desired. Write for bulletin.

HOT ROLLED, COLD FORMING PLATES

For forge welding and cold forming

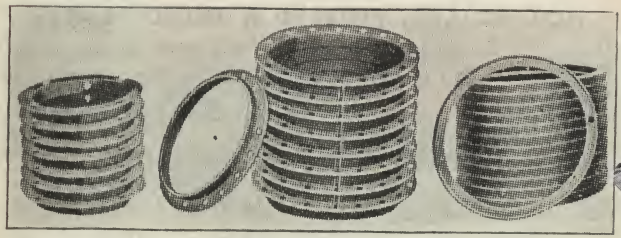
Identification Colors: Red, White and Green

Shipped from our Cleveland Plant

These plates have a minimum tensile strength of 45,000 lbs. per square inch. Used where forming and welding properties are essential.

Size in Inches	Wt. per Square Ft. Lbs.	Stock Lgths. Ft.	Size in Inches	Wt. per Square Ft. Lbs.	Stock Lgths. Ft.
1/2x72	20.40	30	7/8x72	35.70	20
5/8x72	25.50	30	1 x72	40.80	20
3/4x72	30.60	30			

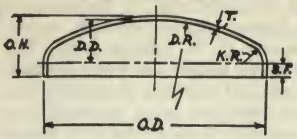
ROLLED RINGS



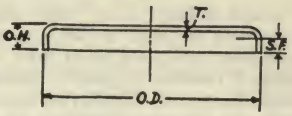
Open butt-joint and welded rings can be furnished promptly from our large and complete steel stocks. Write for prices and complete information on this money-saving service.

HEADS

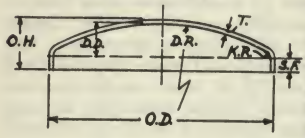
Flanged and Dished A.S.M.E. Code



Flanged Only



Flanged and Dished Standard Type



Key

O.D. .....Outside Diameter
I.D. .....Inside Diameter
T. .....Thickness
S.F. .....Straight Flange
O.H. .....Overall Height
K.R. .....Knuckle Radius
D.R. .....Dish Radius

SIZES CARRIED IN STOCK

Sizes marked √ are available in "Flanged & Dished" Heads.
Sizes marked † are available in "Flanged Only" Heads.
Sizes marked * are available in both "Flanged & Dished" and "Flanged Only" Heads.

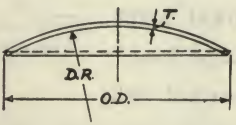
Thickness Ga. or Inches	Outside Diameter (in Inches) After Flanging and Dishing															
	10	12	14	16	18	20	22	24	28	30	36	42	48	54	60	72
No. 12	√	√	.	.	.	.	.	.	.	.	.	.	.	.	.	.
No. 11	√	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
No. 10	√	√	√	√	.	.	.	.	.	.	.	.	.	.	.	.
No. 9	√	√	√	√	√	√	√	√	.	.	.	.	.	.	.	.
3/16	.	√	√	√	√	√	√	*	†	*	*	√	*	.	†	.
1/4	.	.	.	√	√	√	√	*	†	*	*	*	*	.	†	.
5/16	.	.	.	.	√	√	.	*	.	*	*	*	*	√	*	.
3/8	.	.	.	.	.	.	.	*	.	*	*	*	*	*	*	*
7/16	.	.	.	.	.	.	.	.	.	†	†	†	†	†	†	†
1/2	.	.	.	.	.	.	.	.	.	*	*	*	*	*	*	*

Stock Flanged & Dished Heads 1/4" and Heavier. 24" O.D. and larger are made of A.S.T.M.—A-70 Flange Quality Steel. They conform to A.S.M.E. code requirements and Mill Test reports are furnished.

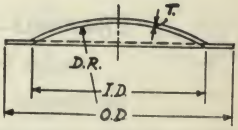
Sizes 3/16" and lighter are standard type made of Prime Quality Hot Rolled Steel.

Flanged only Heads made from A.S.T.M.—A-70 Firebox quality. Special Types made to order. Send us your inquiries.

Dished Only



Cover Head



GALVANIZING

We have excellent facilities for quickly galvanizing by the hot dip process practically all steel sections listed in this stock list and can electro-galvanize rivets, bolts, and small steel sections.

We use nothing but the highest grade virgin spelter in the galvanizing process. The coating is adherent and smooth, resulting in a surface free from uncoated spots. Average coating is not less than 2 ounces per sq. ft. of actual surface.

Hi-Steel 37
H. R. Bars & Strip 39
Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets 12[illegible]
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babb' 203
[illegible] Ror 21
Bo Re 2[illegible]
Data 243
C[illegible]

INLAND HI-STEEL

High in Strength and Corrosion Resistance

Inland Hi-Steel, a low alloy, high strength steel, is furnished at reasonably low cost. It has a much higher ultimate strength, endurance limit and yield point than regular O. H. carbon steel. This makes it possible to greatly reduce dead weight on many applications. Because of the alloying elements and methods of manufacture used, the physical properties of Hi-Steel are more uniform than those of regular O. H. steel. These properties vary little with gauge and are not appreciably affected by heating, forming, welding, flame cutting and similar fabricating operations.

Tests made in more than 50 types of environments show that Inland Hi-Steel has much better corrosion resistance than Copper Bearing or regular O. H. steel. In one industrial atmosphere test, Inland Hi-Steel corroded ony half as much as Copper Bearing Steel, and only one-third as much as regular O. H. steel. As the time was extended, the difference became more marked, indicating an even greater superiority for the corrosion resistance of Inland Hi-Steel. Rural atmosphere and coal leaching tests have further proved Inland Hi-Steel's superior corrosion resistance. In all corrosion tests, Hi-Steel showed a marked resistance to pitting.

Inland Hi-Steel can be readily cold formed with standard equipment. It can be punched and sheared as easily as regular steel, and without excessive burr.

Hot forming can be done without affecting its physical properties.

Inland Hi-Steel can be easily welded by arc, gas, spot, resistance, or flash welding. Because of the low carbon content and non-hardening properties of the alloys in Inland Hi-Steel, welds do not show appreciable hardening and consequently retain full ductility.

Used for greater corrosion resistance and where lighter weight and greater speed is desired in such equipment as railroad cars, trucks, cranes, excavating machinery, etc.

I BEAMS

Shipped from our Chicago Plant

Identification Colors: Green and White

Size in Inches	Weight Per Ft. Lbs.	Thickness of Web	Width of Flange	Net Extra for Size	Stock Lengths Ft.
4	7.7	0.190	2.660	Base	40
5	10.0	0.210	3.000	"	40
6	12.5	0.230	3.330	"	40

CHANNELS—STRUCTURAL SIZES

Shipped from our Chicago Plant

Identification Colors: Green and White

Depth of Channel Inches	Weight Per Ft. Lbs.	Thickness of Web	Width of Flange Inches	Net Extra for Size	Stock Lengths Ft.
3	4.1	0.170	1.410	Base	40
4	5.4	0.180	1.580	"	40
5	6.7	0.190	1.750	"	40
6	8.2	0.200	1.920	"	40

INLAND HI-STEEL

ANGLES—BAR SIZES

Shipped from our Chicago Plant

Identification Colors: Green and White

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
1 x1 x⅛	.80	.30	20
1¼x1¼x⅛	1.01	.30	20
3/16	1.48	.25	20
1½x1½x⅛	1.23	.25	20
3/16	1.80	.15	20
¼	2.34	.15	20
2 x2 x⅛	1.65	.25	20
3/16	2.44	.15	20
¼	3.19	.15	20
2½x2½x⅛	2.08	.25	20
3/16	3.07	.15	20
¼	4.10	.15	20

ANGLES—STRUCTURAL SIZES

Shipped from our Chicago Plant

Identification Colors: Green and White

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
3 x2 x 3/16	3.07	.35	40
¼	4.1	Base	40
3 x3 x⅛	2.5	.50	40
3/16	3.71	.35	40
¼	4.9	Base	40
4 x3 x¼	5.8	Base	40
5/16	7.2	"	40
4 x4 x¼	6.6	Base	40

STRIP—HOT ROLLED

Shipped from our Chicago Plant

Identification Colors: Green and White

Sizes in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
1/8 (.125)			
¾	0.319	.60	16
1	0.425	.40	16
1¼	0.531	.40	16
1½	0.638	.35	16
2	0.850	.35	16
2½	1.063	.30	16
3	1.275	.25	16
3/16 (.180)			
¾	0.478	.55	16
1	0.638	.35	16
1¼	0.797	.35	16
1½	0.956	.30	16
2	1.28	.30	16
2½	1.59	.25	16
3	1.91	.20	16

Hi-Steel 37
H. R. Bars & Strip 39
Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets 13[illegible]
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babb' 203
[illegible] Ro 21
Bo Re 2[illegible]
Data 243
C[illegible]

INLAND HI-STEEL

FLATS—HOT ROLLED

Shipped from our Chicago Plant

Identification Colors: Green and White

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
3/16 and lighter—See Inland Hi-Steel Hot Rolled Strip				3/8x1¼	1.59	Base	16
1/4x ¾	0.638	.40	16	1½	1.91	"	16
1	0.850	.15	16	1¾	2.23	"	16
1¼	1.06	.15	16	2	2.55	"	16
1½	1.28	.15	16	2½	3.19	"	16
1¾	1.49	.15	16	3	3.83	"	16
2	1.70	.15	16	4	5.10	"	16
2½	2.13	.15	16	1/2x1	1.70	"	16
3	2.55	.15	16	1½	2.55	"	16
4	3.40	.15	16	2	3.40	"	16
3/8x ¾	0.956	.30	16	2½	4.25	"	16
1	1.28	Base	16	3	5.10	"	16
				4	6.80	"	16

SHEETS—HOT ROLLED

Identification Colors: Green and White

Gauge and Size in Inches	Est. Wt. Per Sheet Lbs.	Net Size Extra	Gauge and Size in Inches	Est. Wt. Per Sheet Lbs.	Net Size Extra
No. 16x48x120	100.0	.45	No. 11x48x240	400.0	.05
48x192	160.0	.45	60x120	250.0	.20
No. 14x48x120	125.0	.20	60x240	500.0	.20
48x192	200.0	.20	No. 7 ($\frac{3}{16}$")x		
No. 11x48x120	200.0	.05	48x360	900.0	.20

PLATES—HOT ROLLED

Identification Colors: Green and White

Size in Inches	Wt. per Square Ft. Lbs.	Net Extra for Size	Size in Inches	Wt. per Square Ft. Lbs.	Net Extra for Size
3/16x			5/8x		
72x360	7.65	.20	72x240	Chgo. 25.50	Base
1/4x			7/8x		
48x360	10.20	Base	72x240	Chgo. 35.70	"
72x360	10.20	"	1x		
5/16x			72x240	Chgo. 40.80	"
72x360	12.75	"	1-1/8x		
3/8x			72x240	Chgo. 45.90	"
72x360	15.30	"	1-1/4x		
1/2x			72x240	Chgo. 51.00	"
72x360	N.Y. 20.40	"	1-1/2x		
			72x240	Chgo. 61.20	"

Other than stock sizes listed above will be cut on a gross weight basis of multiples of 12" in width or 2 ft. in length.

SHEETS—COLD ROLLED, STRETCHER LEVELED

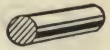
Flatness assured by stretcher leveling. Cold rolled to a high finish, and oiled. Resquared to exact size.

Shipped from our Chicago Plant

Identification Colors: Green and White

U.S.S. Gauge and Size Inches	Est. Wt. per Sheet	U.S.S. Gauge and Size Inches	Est. Wt. per Sheet
No. 16x36x144	90.0	No. 18x48x120	80.0

ROUNDS—HOT ROLLED



O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths Ft.
1/8	0.042	Spec.	12
3/16	0.094	2.00	12,20
1/4	0.167	1.00	12,14,16,18,20,24,30,36†
5/16	0.261	.70	12,14,16,18,20,22,36*
3/8	0.376	.40	6'2",6'8",12,16,18,20, 22,30,36†
7/16	0.511	.30	6'2",12,16,20,22,36*
1/2	0.668	.20	12,16,20,22,30,36†
9/16	0.845	.15	14,16,20,22,36*
5/8	1.04	.10	14,20,22,30,36†
11/16	1.26	.10	16,18,20,22
3/4	1.50	Base	20,22,30,36†,40†
13/16	1.76	"	20,22
7/8	2.04	"	20,22,30,36†
15/16	2.34	"	20
1	2.67	"	20,22,30,36†
1-1/16	3.01	"	20,22
1-1/8	3.38	"	20,22,30,36†
1-3/16	3.77	"	20,22
1-1/4	4.17	"	16,20,22,30,36†
1-5/16	4.60	"	N.Y. 20
1-3/8	5.05	"	20,22,36*
1-7/16	5.51	"	20,22
1-1/2	6.01	"	20,22,30,36†
1-5/8	7.05	.10	20,22,36*
1-3/4	8.18	.10	20,22,30,36†
1-7/8	9.39	.10	20,22,36*
2	10.68	.10	20,22,30,36†
2-1/8	12.06	.15	20,22
2-1/4	13.52	.15	20,22,24,36*
2-3/8	15.06	.15	20,22
2-1/2	16.69	.15	20,22,24,36*
2-5/8	18.40	.20	20,22
2-3/4	20.20	.20	20,22,36*
2-7/8	22.07	.20	20,22
3	24.03	.20	20,22,36*
3-1/8	26.08	.25	20,22
3-1/4	28.21	.25	20,22
3-3/8	30.42	.25	20,22
3-1/2	32.71	.25	20,22
3-5/8	35.09	.25	20,22
3-3/4	37.55	.25	20,22
3-7/8	40.10	.25	20,22
4	42.73	.25	20,22
4-1/8	45.44	.25	20,22
4-1/4	48.23	.25	20,22
4-3/8	51.11	.25	20,22
4-1/2	54.08	.25	20,22
4-5/8	57.12	.35	20,22
4-3/4	60.25	.35	20,22
5	66.76	.35	20,22

(Continued)

† These lengths shipped from our New York plant.

* These 36' lengths shipped from our Chicago plant.

Cutting extras in back of book.

For weight of various length bars, see tables in back of book.

Forging Quality 41
Strip 47
Flats 49
Spring 56
Lewis Iron 63
H. R. Bars & Strip 39
Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
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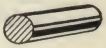
Sheets 1..
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babb' 203
..dair Ror' 21.
Bo Re 2..
Data 243
C..

ROUNDS—HOT ROLLED

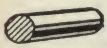


O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths Ft.
(Continued)			
5-1/4	73.60	.45	20,22
5-3/8	77.15	.45	N.Y. 20
5-1/2	80.78	.45	20,22
5-3/4	88.29	.55	20,22
6	96.13	.55	20,22,24
6-1/8	100.20	.65	N.Y. 20
6-1/4	104.31	.65	20,22
6-1/2	112.82	.65	20,22
6-5/8	117.20	.75	N.Y. 20
6-3/4	121.67	.75	20,22
7	130.85	.75	20,22
7-1/8	135.56	.75	Chgo. 20
7-1/4	140.40	.75	20,22
7-1/2	150.21	.75	16,20,22
7-3/4	160.30	.85	Bost. 20
8	170.90	1.10	12,14,20,22

Sizes over 8"—See table below.

Large forged bars, carefully hammered to size, shipped promptly in random lengths of 10 to 13 feet. Longer lengths can also be furnished.



ROUNDS—FORGED

Identification Colors: S.A.E. 1020—Green;

S.A.E. 1035—Blue; S.A.E. 1045—Yellow

Forged over-size to allow for machining to the following finished diameters.

Weights shown are theoretical weight per foot of finished size. Bars will run ½" to ¾" over-size.

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet S.A.E. 1020	S.A.E. 1035	S.A.E. 1045
8-1/4	181.80	1.25	Bost. 16		Chgo. 16
8-1/2	192.92	1.25	20		N.Y. 20
8-3/4	204.42	1.25	Bost. 16		Chgo. 16
9	216.32	1.10	20	20	N.Y. 16
9-1/4	228.45	1.25	Bost. 16		
9-1/2	241.00	1.25	Bost. 20		Chgo. 16
9-3/4	253.00	1.25	Bost. 16		Chgo. 16
10	267.04	1.10	14,20	16,20	Chgo. 16
10-1/2	294.40	1.25			Chgo. 16
11	323.10	1.25			Chgo. 16
11-1/2	353.10	1.25			Chgo. 16
12	384.50	1.25			Chgo. 16
12-1/16	390.00	Spec.	Det. 8,10,12		

FORGING QUALITY STEEL

ROUNDS—HOT ROLLED

Special Hot Rolled, Open Hearth, Silicon Killed, Steel Forging Bars made from selected billets, liberally cropped at both ends, pickled and chipped before rolling.

	S.A.E. 1020	S.A.E. 1025	S.A.E. 1035	S.A.E. 1045	S.A.E. 1095
Iden. Color	Green	Red	Blue	Yellow	Red & Yel.
Carbon	.15 to .20	.20 to .25	.30 to .40	.40 to .50	.90 to 1.05
Max. Phos.	.045	.045	.045	.045	.040
Max. Sulph.	.055	.044	.055	.055	.055
Manganese	.30 to .60	.30 to .60	.60 to .90	.60 to .90	.25 to .50

S. A. E. 1020 is suitable for general forging and case hardening.

S. A. E. 1025 recommended for general forgings where the harder core is required, when case hardened.

S. A. E. 1035 is used extensively for automobile parts, axles, engine crank shafts, piston rods, crank pins and driving shafts.

S. A. E. 1045 is used when a higher carbon S.A.E. specification is necessary.

S. A. E. 1095 will harden to a high degree when water quenched (about 60 Rockwell on the surface) because of its high carbon content. When oil quenched, it develops high tensile strength.

For physical properties, see back of book.

Size in Inches	Weight Per Ft. Lbs.	Net Size Extra	Stock Lengths, Feet S.A.E. 1020	†S.A.E. 1025	S.A.E. 1035	S.A.E. 1045	*S.A.E. 1095 Annealed
3/8	0.375	.40	20,22		N.Y.	20	
7/16	0.511	.30	20,22	..	Cinc.	....	..
1/2	0.668	.20	20,22	..	20	20,22	..
9/16	0.845	.15	20,22	..	Chgo.	....	..
5/8	1.04	.10	20,22	..	20	20,22	..
11/16	1.26	.10	20,22				
3/4	1.50	Base	20,22	20	20	20,22	..
13/16	1.76	"	20,22	..	....	....	..
7/8	2.04	"	20,22	20	20	20,22	..
15/16	2.34	"	20	..	....	....	..
1	2.67	"	20,22	20	20,22	20,22	
1 1/16	3.01	"	20,22	..	....	....	..
1 1/8	3.38	"	20,22	20	20,22	20,22	..
1 3/16	3.77	"	20,22	..	....	....	..
1 1/4	4.17	"	20,22	20	20,22	20,22	..
1 5/16	4.60	"	N.Y.				
1 3/8	5.05	"	20,22	20	20,22	20,22	..
1 7/16	5.51	"	20,22	..	....	....	..
1 1/2	6.01	"	20,22	20	20,22	20,22	..
1 5/8	7.05	.10	20,22	20	20,22	20,22	..
1 3/4	8.18	.10	20,22	20	20,22	20,22	
1 7/8	9.39	.10	20,22	20	20,22	20,22	..
2	10.68	.10	20,22	20	20,22	20,22	16
2 1/8	12.06	.15	20,22	20	20,22	20,22	16
2 1/4	13.52	.15	20,22	20	20,22	20,22	16
2 3/8	15.06	.15	20,22	20	20,22	20,22	16

(Continued)

* Shipped from our Chicago Plant.

† Shipped from our New York Plant.

Cutting extras in back of book.

Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub
Babb
203
Ror
21
Bo
Re
Data 243

FORGING QUALITY STEEL

ROUNDS—HOT ROLLED—(Cont'd)

Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lengths, Feet S.A.E. 1020	†S.A.E. 1025	S.A.E. 1035	S.A.E. 1045	*S.A.E. 1095 Annealed
(Continued)							
2½	16.69	.15	20,22	20	20,22	20,22	16
2⅝	18.40	.20	20,22	20	20,22	20,22	16
2¾	20.20	.20	20,22	20	20,22	20,22	16
2⅞	22.07	.20	20,22	20	20	20,22	..
3	24.03	.20	20,22	20	20,22	20,22	16
3⅛	26.08	.25	20,22	.....	N.Y.	20,22	.....
3¼	28.21	.25	20,22	20	20,22	20,22	16
3⅜	30.42	.25	20,22	..	N.Y.	20,22	..
3½	32.71	.25	20,22	20	20,22	20,22	16
3⅝	35.09	.25	20,22	..	N.Y.	20,22	..
3¾	37.55	.25	20,22	20	20,22	20,22	16
3⅞	40.10	.25	20,22	..	Cinc.	20	..
4	42.73	.25	20,22	20	20,22	20,22	16
4⅛	45.44	.25	20,22	..	N.Y.	N.Y.	..
4¼	48.23	.25	20,22	20	20,22	20,22	16
4⅜	51.11	.25	20,22	.....	Cinc.	.....	
4½	54.08	.25	20,22	20	20,22	20,22	16
4⅝	57.12	.35	20,22	..	N.Y.	N.Y.	..
4¾	60.25	.35	20,22	20	20,22	20,22	16
5	66.76	.35	20,22	20	20,22	20,22	16
5⅛	70.14	.45	.....	.....	N.Y.	.....	
5¼	73.60	.45	20,22	20	20,22	20,22	..
5⅜	77.15	.45	N.Y.	..	Cinc.	....	..
5½	80.78	.45	20,22	20	20,22	20,22	..
5⅝	84.49	.55	....	..	Cinc.	....	..
5¾	88.29	.55	20,22	20	20	20,22	.....
6	96.13	.55	20,22	20	20,22	20,22	..
6⅛	100.19	.65	N.Y.	..	Chgo.	....	..
6¼	104.31	.65	20,22	20	N.Y.	20,22	..
6½	112.82	.65	20,22	20	20	20,22	.....
6⅝	117.20	.75	N.Y.	..	....	....	..
6¾	121.67	.75	20,22	20	N.Y.	20,22	..
7	130.85	.75	20,22	20	20,22	20,22	..
7⅛	135.56	.75	Chgo.	.....			
7¼	140.36	.75	20,22	..	N.Y.	20,22	..
7½	150.21	.75	20,22	..	20	20,22	..
7¾	160.30	.85	Bost.	..	....	Clev.	..
8	170.90	1.10	20,22	.....	20,22	20,22	.....

For Larger Sizes, see page 40.

† Shipped from our New York Plant.

* Shipped from our Chicago Plant.

CONCRETE REINFORCING BARS
DEFORMED ROUNDS AND SQUARES

See Reinforcing Bar Section

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CUSTOMEI
H. F. Ha
J. J. Col
W. H. Ba
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R. G. Spe
C. R. Hir

SHIPPING
W. J. Wi
R. J. You
H. A. We
H. C. Bu

COLD FINI
F. W. Eic
W. H. Ba

TUBULAR
F. W. Eic
J. J Colli

For EI
H. F. Hi
W. J. W

ROUNDS, FREE CUTTING S.A.E. 1120

Special Threading, Hot Rolled Open Hearth Screw Stock

Identification Color: Black

A clean grained, hot rolled steel, low in carbon (.15 to .25) and sulphur content (.075 to .15) A free cutting quality which permits automatic machine work with minimum tool wear and no tearing of stock.

Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.	Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
1/4	0.167	1.00	N.Y. 20	1 1/4	4.17	Base	20,22
5/16	0.261	.70	N.Y. 20	1 5/16	4.60	"	N.Y. 20
3/8	0.376	.40	12,16,20,22	1 3/8	5.05	"	N.Y. 20
7/16	0.511	.30	12,16,20,22	1 1/2	6.01	"	N.Y. 20
1/2	0.668	.20	12,16,20,22	1 5/8	7.05	.10	N.Y. 20
5/8	1.04	.10	16,20,22	1 3/4	8.18	.10	N.Y. 20
11/16	1.26	.10	20	1 7/8	9.39	.10	N.Y. 20
3/4	1.50	Base	20,22	2	10.68	.10	N.Y. 20
13/16	1.76	"	N.Y. 20	2 1/4	13.52	.15	N.Y. 20
7/8	2.04	"	20,22	2 3/8	15.06	.15	N.Y. 20
15/16	2.35	"	Chgo. 18	2 1/2	16.69	.15	N.Y. 20
1	2.67	"	20,22	2 3/4	20.20	.20	N.Y. 20
1 1/8	3.38	"	20,22	4	42.73	.20	N.Y. 20

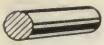
ROUNDS—HOT ROLLED S.A.E. X1314

Identification Color: Gold

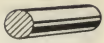
A well recognized type of case hardening steel having about 95% of the machinability of S.A.E. 1112. It takes a uniform hard case and retains a strong, tough core. In the as rolled condition, it has a tensile strength of about 70,000 lbs. per square inch. Suitable for medium duty shafts, studs, pins and other machine parts.

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.	Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
7/16	0.511	.30	20	3 1/8	26.08	.25	20
1/2	0.668	.20	20	3 1/4	28.21	.25	20
5/8	1.04	.10	20	3 3/8	30.42	.25	20
3/4	1.50	Base	20	3 1/2	32.71	.25	20
7/8	2.04	"	20	3 5/8	35.09	.25	20
1	2.67	"	20	3 3/4	37.55	.25	20
1 1/8	3.38	"	20	4	42.73	.25	20
1 1/4	4.17	"	20	4 1/4	48.23	.25	20
1 5/16	4.60	"	20	4 1/2	54.08	.25	20
1 3/8	5.05	"	20	4 3/4	60.25	.35	20
1 1/2	6.01	"	20	5	66.76	.35	20
1 5/8	7.05	.10	20	5 1/4	73.60	.45	20
1 3/4	8.18	.10	20	5 1/2	80.78	.45	20
1 7/8	9.39	.10	20	5 3/4	88.29	.55	20
2	10.68	.10	20	6	96.13	.55	20
2 1/8	12.06	.15	20	6 1/4	104.31	.65	20
2 1/4	13.52	.15	20	6 1/2	112.82	.65	20
2 3/8	15.06	.15	20	6 3/4	121.67	.75	20
2 1/2	16.69	.15	20	7	130.85	.75	20
2 5/8	18.40	.20	20	7 1/4	140.36	.75	20
2 3/4	20.20	.20	20	7 1/2	150.21	.75	20
2 7/8	22.07	.20	20	8	170.90	1.10	20
3	24.03	.20	20				

Cold Fin Bars 65
Alloys 89
Heat Treat Alloys 117
Tool Steel 123
Sheets
Spec. Sheet 157
Stainles 167
Tubing 189
Bbr. Tub Babb 203
Ro 21
Bo Re 2
Data 243



ROUNDS—HOT ROLLED S.A.E. X1335



Identification Colors: Red and Gold

A general purpose carbon manganese steel of high quality. Suitable for axles, shafts, bolts, pins and other applications where strength, toughness and easy machining qualities are required.

S.A.E. X1335 is melted, cast and rolled under close operating control and is of unusually uniform quality.

Machinability will be found much better than that of many other steels of similar analysis.

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
3/8	0.376	.40	20	3 1/8	26.08	.25	20
1/2	0.668	.20	20	3 1/4	28.21	.25	20
9/16	0.845	.15	20	3 3/8	30.42	.25	20
5/8	1.04	.10	20	3 1/2	32.71	.25	20
3/4	1.50	Base	20	3 5/8	35.09	.25	20
7/8	2.04	"	20	3 3/4	37.55	.25	20
1	2.67	"	20	3 7/8	40.13	.25	20
1 1/16	3.01	"	20	4	42.73	.25	20
1 1/8	3.38	"	20	4 1/8	45.44	.25	20
1 3/16	3.77	"	20	4 1/4	48.23	.25	20
1 1/4	4.17	"	20	4 3/8	51.11	.25	20
1 5/16	4.60	"	20	4 1/2	54.08	.25	20
1 3/8	5.05	"	20	4 5/8	57.12	.35	20
1 7/16	5.52	"	20	4 3/4	60.25	.35	20
1 1/2	6.01	"	20	5	66.76	.35	20
1 5/8	7.05	.10	20	5 1/4	73.60	.45	20
1 3/4	8.18	.10	20	5 1/2	80.78	.45	20
1 7/8	9.39	.10	20	5 3/4	88.29	.55	20
2	10.68	.10	20	6	96.13	.55	20
2 1/8	12.06	.15	20	6 1/4	104.31	.65	20
2 1/4	13.52	.15	20	6 1/2	112.82	.65	20
2 3/8	15.06	.15	20	6 3/4	121.67	.75	20
2 1/2	16.69	.15	20	7	130.85	.75	20
2 5/8	18.40	.20	20	7 1/4	140.36	.75	20
2 3/4	20.20	.20	20	7 1/2	150.21	.75	20
2 7/8	22.07	.20	20	7 3/4	160.80	.85	20
3	24.03	.20	20	8	170.90	1.10	20

ROUNDS—GALVANIZED

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Hot Dip Galvanized with prime virgin zinc to A.S.T.M. Specification A-123-33; subjected to the Preece Test—A-90-39. Average coating not less than 2 ounces per square foot of surface.

Size in Inches	App. Wt. Per Ft. Lbs.	Net Size Extra	Stock Length Ft.	Size in Inches	App. Wt. Per Ft. Lbs.	Net Size Extra	Stock Length Ft.
3/16	.099	2.00	N.Y. 16	1/2	.701	.20	16,20
1/4	.175	1.00	12,16,20	5/8	1.09	.10	16,20
5/16	.274	.70	20	3/4	1.58	Base	16
3/8	.394	.40	16,20	7/8	2.14	"	20
7/16	.537	.30	20	1	2.80	"	20

Extras for galvanizing vary and are subject to quotation. Other stock size rounds can be galvanized quickly.

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CUSTOME
H. F. Ha
J. J. Col
W. H. Ba
C. H. Ter
R. G. Spe
C. R. Hir

SHIPPING
W. J. Wi
R. J. You
H. A. We
H. C. Bu

COLD FIN
F. W. Eic
W. H. Ba

TUBULAR
F. W. Eic
J. J Colli

For E
H. F. H
W. J. W

FORGING QUALITY STEEL

SQUARES—HOT ROLLED

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet S.A.E. 1020	S.A.E. 1045
1/2	0.850	.20	20,22	N.Y. 20
9/16	1.076	.15	20	..
5/8	1.328	.10	20,22	N.Y. 20
11/16	1.610	.10	N.Y. 20	..
3/4	1.913	Base	20,22	20
13/16	2.245	"	20	
7/8	2.603	"	20,22	N.Y. 20
1	3.400	"	20,22	20
1-1/8	4.303	"	20	N.Y. 20
1-1/4	5.312	"	20,22	20
1-3/8	6.428	"	20	20
1-1/2	7.650	"	20,22	20,22
1-5/8	8.978	.10	20	..
1-3/4	10.41	.10	20,22	20,22
1-7/8	11.95	.10	20	..
2	13.60	.10	20,22	20,22
2-1/8	15.36	.15	N.Y. 20	..
2-1/4	17.22	.15	20,22	20,22
2-1/2	21.25	.15	20,22	20,22
2-5/8	23.43	.20	Chgo. 20	..
2-3/4	25.71	.20	20	20
3	30.60	.20	20,22	20
3-1/4	35.92	.25	20,22	..
3-3/8	38.73	.25	N.Y. 20	..
3-1/2	41.65	.25	20,22	20
3-3/4	47.81	.25	20,22	
4	54.40	.25	20,22	20
4-1/4	61.41	.25	20,22	..
4-1/2	68.85	.25	20,22	..
5	85.00	.35	20,22	20
6	122.40	.55	20	

SQUARES—COLD TWISTED

HOT ROLLED

Manufacturers' Standard Specifications

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size & Twisting	Stock Lgths. Ft.	Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size & Twisting	Stock Lgths. Ft.
1/4	0.213	1.75	N.Y. 20	5/8	1.330	.35	20,22
5/16	0.332	1.45	N.Y. 20	3/4	1.910	.25	20,22
3/8	0.478	.65	20,22	7/8	2.600	.25	N.Y. 20
7/16	0.651	.55	N.Y. 20	1	3.400	.25	N.Y. 20
1/2	0.850	.45	20,22	1 1/4	5.310	.25	N.Y. 20

CONCRETE REINFORCING BARS DEFORMED SQUARES AND ROUNDS

See Reinforcing Bar Section.

RYERSON "ESTATE" CURBING

Shipped from our New York Plant

A strong, pliable, hot rolled steel curbing for driveways and walks. Furnished painted, complete with stakes in 1/4 x 5-inch sections, 16 feet long or galvanized in 3/16 x 5-inch sections, 16 feet long. Write for bulletin.

Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Bbt. Tub Babb' 203
Data 243

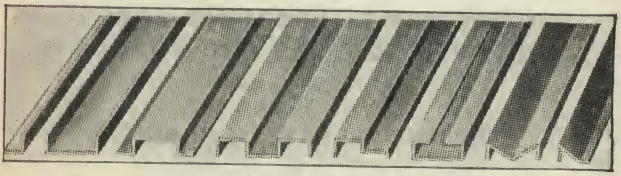
SQUARES—HOT ROLLED

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths Ft.
3/16	.120	2.00	12
1/4	.213	1.00	12,14,16,20
5/16	.332	.70	12,14,16,20,22
3/8	.478	.40	12,14,16,20,22,36*
7/16	.651	.30	12,14,16,20,22
1/2	.850	.20	14,16,20,22,40
9/16	1.076	.15	14,16,20
5/8	1.328	.10	14,20,22, N.Y. 36
11/16	1.607	.10	N.Y. 20
3/4	1.913	Base	20,22, N.Y. 36
13/16	2.245	"	20
7/8	2.603	"	20,22,36*
1	3.400	"	16,20,22, N.Y. 36
1-1/8	4.303	"	20,22,36†
1-1/4	5.313	"	20,22, N.Y. 36
1-3/8	6.428	"	20,22
1-1/2	7.650	"	20,22, N.Y. 36
1-5/8	8.978	.10	20,22
1-3/4	10.41	.10	20,22,36*
1-7/8	11.95	.10	20
2	13.60	.10	20,22, N.Y. 36
2-1/8	15.36	.15	N.Y. 20
2-1/4	17.21	.15	20,22,36†
2-1/2	21.25	.15	20,22,36†
2-5/8	23.43	.20	Chgo. 20
2-3/4	25.71	.20	20,22
3	30.60	.20	20,22,36†
3-1/4	35.91	.25	20,22,36†
3-3/8	38.73	.25	N.Y. 20
3-1/2	41.65	.25	20,22,36†
3-3/4	47.81	.25	20,22
4	54.40	.25	20,22,36†
4-1/4	61.41	.25	20,22
4-1/2	68.85	.25	18,20,22,24
5	85.00	.35	20,22
6	122.40	.55	20

*These 36' lengths shipped from our Chicago plant.
†These 36' lengths shipped from our Buffalo plant.
Cutting extras in back of book.

SPECIAL FORMED PARTS



Many manufacturers are saving time, trouble and money by supplementing their own production facilities with quick Ryerson service on special sections formed from the wide range of steel carried in Ryerson stock. Write for details.

HOT ROLLED STRIP—SOFT O. H. STEEL

(Bands and Hoops in straight lengths)

This strip will bend flat on itself, either with or against the grain, without cracking.

Size in Inches	Wt. per Ft., Lbs.	Net Extra for Size	Stock Lgths., Ft.
3-16 (.180)			
⅜	0.239	1.45	12
½	0.319	1.05	12,20
⅝	0.398	.70	12,16,20
¾	0.478	.55	12,16,20
⅞	0.558	.45	12,16,20
1	0.638	.35	12,16,20
1⅛	0.717	.35	12,14,16,20
1¼	0.797	.35	12,20
1⅜	0.877	.35	12,20
1½	0.956	.30	12,20
1¾	1.12	.30	12,20
2	1.28	.30	12,20,22
2¼	1.43	.25	12,20
2½	1.59	.25	12,20,22
2¾	1.75	.20	12,20
3	1.91	.20	12,20
3¼	2.07	.15	20
3½	2.23	.15	12,20
4	2.55	.15	12,20,22
4½	2.87	.10	20
5	3.19	.10	20,22
5½	3.51	.10	12,20
6	3.83	.10	12,20,22
7	4.46	.05	20
8	5.10	.05	20
9	5.74	.05	20
10	6.38	.05	20
12	7.65	.05	20
14	8.93		
15	9.56		
16	10.20		—See Hot Rolled Sheets
18	11.48		
20	12.75		
22	14.03		
1-8 (.125)			
⅜	0.159	1.60	12,20
½	0.213	1.10	12,20
⅝	0.266	.75	12,14,16,20
¾	0.319	.60	12,16,20
⅞	0.372	.50	12,16,20
1	0.425	.40	12,16,20
1⅛	0.477	.40	12,14,16,20
1¼	0.531	.40	12,14,16,20
1⅜	0.584	.40	12,20
1½	0.638	.35	12,20
1⅝	0.691	.35	12,N.Y. 20
1¾	0.744	.35	12,20
2	0.850	.35	12,20

B.W. Ga. and Size in Inches	Wt. per Ft., Lbs.	Net Extra for Size	Stock Lgths., Ft.
1-8 (.125)			
2¼	0.956	.30	12,16,20,22
2½	1.063	.30	12,20,22
2¾	1.169	.25	12,20
3	1.275	.25	12,20
3¼	1.381	.20	20
3½	1.488	.20	12,20
3¾	1.594	.20	N.Y. 20
4	1.700	.20	12,20,22
4½	1.913	.15	12,20
5	2.125	.15	20,22
5½	2.338	.15	20
6	2.550	.15	20,22
7	2.975	.10	20
8	3.400	.10	20
9	3.825	.10	20
10	4.250	.10	20
12	5.100	.10	20
No. 12 (.109)			
⅜	0.139	1.70	12
½	0.185	1.20	N.Y. 20
⅝	0.232	.85	N.Y. 20
¾	0.278	.70	N.Y. 20
⅞	0.324	.60	10,20
1	0.371	.50	12,16
1⅛	0.417	.50	12
1¼	0.463	.50	N.Y. 20
1⅜	0.510	.50	Chgo. 16
1½	0.556	.40	N.Y. 20
1¾	0.649	.40	N.Y. 20
2	0.741	.40	N.Y. 20
2¼	0.834	.35	N.Y. 20
2½	0.927	.35	N.Y. 20
2¾	1.019	.30	N.Y. 20
3	1.112	.30	N.Y. 20
3½	1.297	.25	N.Y. 20
4	1.482	.25	N.Y. 20
No. 14 (.083)			
⅜	.1058	2.00	N.Y. 12
½	.1411	1.35	12,14
⅝	.1764	.95	12,16
*¾	.2117	.85	12,16
⅞	.2469	.70	12,14
1	.2822	.60	12,14
1⅛	.3175	.60	12
1¼	.3528	.60	12,16
1½	.4233	.45	12,14
1¾	.4939	.45	12,16
2	.5644	.45	12,16

(Continued)

* This size also carried in coils.

Straight lengths average 125 lbs. to the bundle.

Strip galvanized by hot dip or electric process can be furnished promptly in any of the sizes listed.

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Alloys 89
Heat Treat Alloys 117
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HOT ROLLED STRIP—SOFT O. H. STEEL

(Hoops in straight lengths)

B.W. Ga. and Size in Inches	Wt. per Ft., Lbs.	Net Extra for Size	Stock Lgths. Ft.
(Continued)			
No. 14 (.083)			
2¼	.6350	.40	12,16
2½	.7055	.40	12,16
2¾	.7761	.35	12
3	.8466	.35	12,16
3½	.9870	.35	12
4	1.128	.35	12
No. 16 (.065)			
⅜	.0829	2.40	12,16
*½	.1105	1.55	12
*⅝	.1381	1.05	12
*¾	.1658	.90	12,16
*⅞	.1934	.80	12,16
*1	.2210	.65	12,16
1⅛	.2486	.65	N.Y. 12
*1¼	.2763	.65	12,16
*1½	.3315	.50	12,16
*1¾	.3868	.50	12
2	.4420	.50	12,16
2¼	.4973	.45	12,16
2½	.5525	.45	12,16
2¾	.6078	.45	Chgo. 16
3	.6630	.45	12,16
3½	.7735	.45	12
4	.8840	.50	12

* These sizes also carried in coils.

HOT ROLLED STRIP SOFT O. H. STEEL

(Hoops)

In Coils

B.W. Ga. and Size in Inches	Wt. per Ft., Lbs.	Net Extra for Size	Approx. Wt. per Coil, Lbs.
No. 18 (.049)			
½	.0833	1.95	Chgo. 60
⅝	.1041	1.25	60
¾	.1250	1.05	60
⅞	.1458	.90	60
1	.1666	.75	80
1⅛	.1874	.75	N.Y. 80
1¼	.2083	.75	80
1½	.2499	.60	80
1¾	.2916	.60	80
2	.3332	.60	80
2½	.4165	.70	Clev. 80
2¾	.4582	.70	Chgo. 80
3	.4998	.70	Chgo. 80
No. 19 (.042)			
1	.1428	.85	N.Y. 80
1¼	.1785	.85	N.Y. 80
1½	.2142	.70	Chgo. 80
1¾	.2499	.70	Chgo. 80
No. 20 (.035)			
½	.0595	2.35	Chgo. 60
⅝	.0744	1.65	Chgo. 60
¾	.0893	1.35	60
⅞	.1041	1.05	60
1	.1190	.95	70
1⅛	.1339	.95	70
1¼	.1488	.95	70
1½	.1785	.90	70
2	.2380	.90	70
No. 22 (.028)			
½	.0476	3.25	45
⅝	.0595	2.35	50
¾	.0714	1.85	60
⅞	.0833	1.55	60
1	.0952	1.45	60
1⅛	.1071	1.45	N.Y. 60
1¼	.1190	1.45	60
1½	.1428	1.35	75

Hot Rolled Strip can be straightened and cut to special lengths at a small advance in price.

Can be furnished galvanized by hot dip or electric process.

Cutting to special lengths, see extras in back of book.

HOT ROLLED STRIP FLATS—GALVANIZED

See Page 55.

COLD ROLLED STRIP

See Sheet Section.

FLATS—HOT ROLLED

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
3/16 and lighter—See Hot Rolled Strip			
1/4x 3/8	0.319	1.40	12,14,16,20
1/2	0.425	.90	12,14,16,20
5/8	0.531	.60	12,14,16,20,22
3/4	0.638	.40	12,14,16,20,22
7/8	0.744	.30	12,14,16,20
1	0.85	.15	12,14,16,20,22, N.Y. 36
1 1/8	0.956	.15	18,20,22
1 1/4	1.06	.15	20,22, N.Y. 36
1 3/8	1.17	.15	12,20,22
1 1/2	1.28	.15	20,22, N.Y. 36
1 5/8	1.38	.15	N.Y. 20
1 3/4	1.49	.15	20,22, Buff. 36
2	1.70	.15	20,22, N.Y. 36
2 1/4	1.91	.15	20,22, Buff. 36
2 1/2	2.13	.15	20,22, N.Y. 36
2 3/4	2.34	.15	20,22, Buff. 36
3	2.55	.15	20,22, N.Y. 36
3 1/4	2.76	.15	20,22
3 1/2	2.98	.15	20,22, N.Y. 36
3 3/4	3.19	.15	N.Y. 20
4	3.40	.15	20,22, N.Y. 36
4 1/4	3.61	.15	N.Y. 20
4 1/2	3.83	.15	20,22, N.Y. 36
5	4.25	.15	20,22, N.Y. 36
5 1/2	4.68	.15	20, Buff. 36
6	5.10	.15	20,22, N.Y. 36
5/16x 1/2	0.531	.90	12,14,16,20,22
5/8	0.664	.60	12,14,16,20,22
3/4	0.797	.40	12,14,16,20
7/8	0.93	.30	12,14,16,18,20
1	1.06	.15	18,20,22, Buff. 36
1 1/8	1.20	.15	18,20,22
1 1/4	1.33	.15	18,20,22, Buff. 36
1 3/8	1.46	.15	20,22
1 1/2	1.59	.15	18,20,22, N.Y. 36
1 3/4	1.86	.15	18,20,22, Buff. 36
2	2.13	.15	18,20,22, Buff. 36
2 1/4	2.39	.15	20,22, Buff. 36
2 1/2	2.66	.15	20,22, N.Y. 36
2 3/4	2.92	.15	Chgo. 16
3	3.19	.15	20,22, N.Y. 36
3 1/4	3.45	.15	Chgo. 16
3 1/2	3.72	.15	20,22, N.Y. 36
4	4.25	.15	20,22, N.Y. 36
4 1/2	4.78	.15	N.Y. 20
5	5.31	.15	20,22
5 1/2	5.84	.15	20
6	6.38	.15	20,22, Buff. 36
3/8x 1/2	0.638	.70	12,14,16,18,20,22
5/8	0.797	.40	12,14,16,20
3/4	0.956	.30	12,14,16,20,22
7/8	1.12	.20	12,14,16,20,22
1	1.28	Base	18,20,22, Buff 36
1 1/8	1.43	"	18,20,22
1 1/4	1.59	"	18,20,22, Buff. 36
1 3/8	1.75	"	18,20,22

(Continued)

Cutting to special lengths, see extras in back of book.

FLATS—HOT ROLLED

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lengths Ft.
(Continued)			
3/8x1½	1.91	Base	20,22, N Y. 36
1⅝	2.08	"	N.Y. 20
1¾	2.23	"	20,22, N.Y. 36
2	2.55	"	20,22, N.Y. 36
2¼	2.87	"	20,22, N.Y. 36
2½	3.19	"	20,22, N.Y. 36
2¾	3.51	"	20,22, N.Y. 36
3	3.83	"	20,22, N.Y. 36
3¼	4.14	"	20,22
3½	4.46	"	20,22, N.Y. 36
4	5.10	"	20,22, N.Y. 36
4½	5.74	"	20,22, Buff. 36
5	6.38	"	20,22, N.Y. 36
5½	7.01	"	20
6	7.65	"	20,22, N.Y. 36
7/16x ¾	1.12	.30	N.Y. 20
⅞	1.30	.20	Chgo. 16
1	1.49	Base	N.Y. 20
1¼	1.86	"	20
1⅜	2.05	"	Chgo. 16
1½	2.23	"	20
1¾	2.60	"	N.Y. 20
2	2.98	"	20
2¼	3.35	"	N.Y. 20
2½	3.72	"	20
3	4.46	"	20
3½	5.21	"	N.Y. 20
4	5.95	"	N.Y. 20
4½	6.70	"	Chgo. 16
5	7.44	"	Chgo. 16
6	8.93	"	N.Y. 20
1/2x ⅝	1.06	.40	12,14,16,20,22
¾	1.28	.30	12,14,16,20,22
⅞	1.49	.20	14,16,18,20,22
1	1.70	Base	18,20,22, N.Y. 36
1⅛	1.91	"	14,18,20,22
1¼	2.13	"	18,20,22,Buff. 36
1⅜	2.34	"	20,22
1½	2.55	"	18,20,22, N.Y. 36
1⅝	2.76	"	N.Y. 20
1¾	2.98	"	18,20,22, N.Y. 36
2	3.40	"	20,22, N.Y. 36
2¼	3.83	"	20,22, Buff. 36
2½	4.25	"	20,22, N.Y. 36
2¾	4.68	"	20,22, N.Y. 36
3	5.10	"	20,22, N.Y. 36
3¼	5.53	"	20,22
3½	5.95	"	20,22, N.Y. 36
3¾	6.38	"	N.Y. 20
4	6.80	"	20,22, N.Y. 36
4½	7.65	"	20,22, Buff. 36
5	8.50	"	20,22, N.Y. 36
5½	9.35	"	20, Buff. 36
6	10.20	"	20,22, Buff. 36
(Continued)			

Cutting to special lengths, see extras in back of book.
For weight of various length bars, see tables in back of book.

FLATS—HOT ROLLED

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
(Continued)			
5/8x ¾	1.59	.30	20
⅞	1.86	.20	20
1	2.13	Base	18,20,22
1⅛	2.39	"	17,20,22
1¼	2.66	"	18,20,22, N.Y. 36
1⅜	2.92	"	N.Y. 20
1½	3.19	"	18,20,22, N.Y. 36
1⅝	3.46	"	N.Y. 20
1¾	3.72	"	20,22, Buff. 36
2	4.25	"	20,22, N.Y. 36
2¼	4.78	"	20,22, N.Y. 36
2½	5.31	"	20,22, N.Y. 36
2¾	5.84	"	20,22, Buff. 36
3	6.38	"	20,22, N.Y. 36
3¼	6.91	"	20,22
3½	7.44	"	20,22, Buff. 36
4	8.50	"	20,22, N.Y. 36
4½	9.56	"	20,22, Buff. 36
5	10.63	"	20,22, Buff. 36
5½	11.69	"	20
6	12.75	"	20,22, N.Y. 36
3/4x ⅞	2.23	.20	N.Y. 20
1	2.55	Base	18,20,22, N.Y. 36
1⅛	2.87	"	N.Y. 20
1¼	3.19	"	18,20,22, Buff. 36
1⅜	3.51	"	Buff. 16
1½	3.83	"	18,20,22, Buff. 36
1⅝	4.15	"	20
1¾	4.46	"	20,22, N.Y. 36
2	5.10	"	12,20,22, N.Y. 36
2¼	5.74	"	20,22
2½	6.38	"	20,22, N.Y. 36
2¾	7.01	"	20,22, Buff. 36
3	7.65	"	20,22, N.Y. 36
3¼	8.29	"	20,22
3½	8.93	"	20,22, Buff. 36
4	10.20	"	20,22, N.Y. 36
4½	11.48	"	20,22, Buff. 36
5	12.75	"	20,22, N.Y. 36
5½	14.03	"	20
6	15.30	"	20,22, N.Y. 36
7/8x1	2.98	Base	20,22
1⅛	3.35	"	N.Y. 20
1¼	3.72	"	12,20
1⅜	4.09	"	Chgo. 16
1½	4.46	"	20,22, Buff. 36
1¾	5.21	"	20,22, Buff. 36
2	5.95	"	20,22, Buff. 36
2¼	6.69	"	20,22
2½	7.44	"	20,22, Buff. 36
2¾	8.18	"	20
3	8.93	"	20,22, Buff. 36
3¼	9.67	"	Bost. 20

(Continued)

Cutting to special lengths, see extras in back of book.

Cold Fin Bars 65
Alloys 89
Heat Trea Alloys 117
Tool Steel 123
Sheets
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Stainle 167
Tubin 189
Blr. Tub Babb 203
Roo 21
Bo Re 2
Data 243

FLATS—HOT ROLLED

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths Ft.
(Continued)			
7/8x3½	10.41	Base	20,22, Buff. 36
4	11.90	"	20,22, N.Y. 36
4½	13.39	"	20,22
5	14.88	"	20,22, Buff. 36
5½	16.36	"	N.Y. 20
6	17.85	"	20,22, Buff. 36
1 x1¼	4.25	Base	20,22, Buff. 36
1½	5.10	"	20,22, N.Y. 36
1¾	5.95	"	20,22, Buff. 36
2	6.80	"	20,22, N.Y. 36
2¼	7.65	"	20,22, Buff. 36
2½	8.50	"	20,22, N.Y. 36
2¾	9.35	"	20,22
3	10.20	"	20,22, N.Y. 36
3¼	11.05	"	20
3½	11.90	"	20,22, N.Y. 36
4	13.60	"	20,22, N.Y. 36
4½	15.30	"	20,22, N.Y. 36
5	17.00	"	20,22, N.Y. 36
5½	18.70	"	20
6	20.40	"	20,22, N.Y. 36
1-1/8x2	7.65	.10	20
2½	9.56	.10	20, Buff. 36
3	11.48	.10	N.Y. 20, Buff. 36
3¼	12.43	.15	Bost. 20
3½	13.39	.15	N.Y. 20
4	15.30	.20	20, Buff. 36
5	19.13	.20	N.Y. 20
6	22.95	.20	N.Y. 20
1-1/4x1½	6.38	.10	20,22, Buff. 36
1¾	7.44	.10	20,22, Buff. 36
2	8.50	.10	20,22, Buff. 36
2¼	9.56	.10	20,22, Buff. 36
2½	10.63	.10	20,22, Buff. 36
2¾	11.69	.10	20
3	12.75	.10	20,22, N.Y. 36
3¼	13.81	.15	Chgo. 16
3½	14.88	.15	20,22, Buff. 36
4	17.00	.20	20,22, N.Y. 36
4½	19.13	.20	20,22, Chgo. 30
5	21.25	.20	20,22, N.Y. 30
5½	23.38	.20	N.Y. 20, Clev. 30
6	25.50	.20	20,22, N.Y. 30
1-3/8x4½	21.04	.20	Clev. 16
1-1/2x1¾	8.92	.10	N.Y. 20
2	10.20	.10	20,22, N.Y. 36
2¼	11.47	.10	20,22
2½	12.75	.10	20,22, Buff. 36
2¾	14.03	.10	N.Y. 20
3	15.30	.10	20,22, N.Y. 36
3½	17.85	.15	20,22, Buff. 36
4	20.40	.20	20,22, N.Y. 36
4½	22.95	.20	20,22, Buff. 36
5	25.50	.20	20,22, N.Y. 36
5½	28.05	.20	Chgo. 16
6	30.60	.20	20,22, Buff. 36
(Continued)			

Cutting to special lengths, see extras in back of book.

FLATS—HOT ROLLED

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths Ft.
(Continued)			
1-3/4x2	11.90	.10	20
2¼	13.39	.10	Bost. 20
2½	14.88	.10	20,22
3	17.85	.10	20,22, Buff. 36
3½	20.83	.15	20,22
4	23.80	.20	20,22, Buff. 36
4½	26.78	.20	20
5	29.75	.20	20,22, Chgo. 30
5½	32.73	.20	Chgo. 16
6	35.70	.20	20,22, Buff. 36
2 x2½	17.00	.10	20,22, Buff. 36
3	20.40	.10	20,22, N.Y. 36
3½	23.80	.15	20,22, Buff. 36
4	27.20	.20	20,22, N.Y. 36
4½	30.60	.20	20,22, Chgo. 30
5	34.00	.20	20,22, Buff. 36
6	40.80	.20	20,22, Buff. 36
2-1/4x2½	19.13	.25	20
3	22.95	.25	20
3½	26.77	.25	20
4	30.60	.25	20
2-1/2x3	25.50	.25	20,22, Buff. 36
3½	29.75	.25	20,22
4	34.00	.25	20,22
4½	38.26	.25	20,22
5	42.50	.25	20,22
6	51.00	.30	20,22
3 x3½	35.70	.25	20,22
4	40.80	.25	20,22
4½	45.90	.25	N.Y. 20
5	51.00	.25	20,22
6	61.20	.30	20,22
3-1/2x4	47.60	.35	20
6	71.40	.40	20,22
4 x6	81.60	3.00	Clev. 16

Cutting to special lengths, see extras in back of book.
For weight of various length bars, see tables in back of book.

LARGE HALF OVAL IRON

Guard Iron or Boat Iron

Shipped from our New York Plant

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Random Lengths Ft.
¾x5	10.61	Base	20
1 x6	16.20	"	20

OCTAGON STEEL POKER BARS

HOT ROLLED—FORGING QUALITY

See Tool Steel Section

Cold Fin Bars 65
Alloys 89
Heat Treat Alloys 117
Tool Steel 123
Sheets
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Stainless 167
Tubing 189
Blr. Tub Babbi 203
Rod 21
Bo Re 2
Data 243

FLATS—HOT ROLLED

O. H. Steel—High Carbon
S.A.E. 1045

Identification Color: Yellow

Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
1/4x1	0.85	.15	20
1¼	1.06	.15	20
1½	1.28	.15	20
2	1.70	.15	20
2¼	1.91	.15	Chgo.
2½	2.13	.15	20
3	2.55	.15	20
4	3.40	.15	20
5	4.25	.15	20
6	5.10	.15	20
5/16x1½	1.59	.15	Chgo.
3/8x 5/8	0.80	.40	Chgo.
1	1.28	Base	20
1¼	1.59	"	20
1½	1.91	"	20
2	2.55	"	20
2¼	2.87	"	N.Y.
2½	3.19	"	20
3	3.83	"	20
3½	4.46	"	Chgo.
4	5.10	"	20
5	6.38	"	20
6	7.65	"	20
1/2x1	1.70	Base	20
1¼	2.13	"	20
1½	2.55	"	20
2	3.40	"	20
2½	4.25	"	20
3	5.10	"	20
4	6.80	"	20
5	8.50	"	20
6	10.20	"	20
5/8x1½	3.19	Base	20
2	4.25	"	20
2½	5.31	"	20
3	6.38	"	20
4	8.50	"	20
5	10.63	"	20
6	12.75	"	20
3/4x1	2.55	Base	20
1½	3.83	"	20
3/4x2	5.10	Base	20
2½	6.38	"	20
3	7.65	"	20
4	10.20	"	20
5	12.75	"	20
6	15.30	"	20
7/8x2	5.95	Base	Chgo.
2½	7.44	"	Chgo.
3	8.93	"	Chgo.
4	11.90	"	Chgo.
6	17.85	"	Chgo.
1 x2	6.80	Base	20
2½	8.50	"	20
3	10.20	"	20
4	13.60	"	20
5	17.00	"	20
6	20.40	"	20
1-1/4x2	8.50	.10	N.Y.
2½	10.63	.10	20
3	12.75	.10	N.Y.
4	17.00	.20	N.Y.
5	21.25	.20	N.Y.
6	25.50	.20	N.Y.
1-1/2x2	10.20	.10	N.Y.
2½	12.75	.10	Bost.
3	15.30	.10	N.Y.
4	20.40	.20	N.Y.
5	25.50	.20	N.Y.
6	30.60	.20	N.Y.
2 x2½	17.00	.10	Chgo.
3	20.40	.10	20
4	27.20	.20	20
5	34.00	.20	N.Y.
6	40.80	.20	N.Y.
2-1/2x4	34.00	.25	N.Y.
5	42.50	.25	N.Y.
6	51.00	.30	N.Y.
3 x4	40.80	.25	N.Y.
5	51.00	.25	N.Y.
6	61.20	.30	N.Y.

FLATS—ROUND BEVEL EDGE

HOT ROLLED

Soft O. H. Steel—Radius Equal to Thickness

Shipped from our Cleveland Plant

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
5/16x1¼	1.19	.25	16
3/8x1½	1.71	.10	16

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CUSTOME
H. F. Ha
J. J. Coll
W. H. Ba
C. H. Ter
R. G. Spa
C. R. Hir

SHIPPING
W. J. Wi
R. J. You
H. A. We
H. C. Bur

COLD FINI
F. W. Eic
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TUBULAR
F. W. Eic
J. J Colli

For EN
H. F. HA
W. J. W

HOT ROLLED STRIP—GALVANIZED

(Hoops—In Coils)

Hot Dip Galvanized with prime virgin zinc to A.S.T.M. Specification Test Standards—A-90-39—the Preece Test.

B.W. Ga. and Size in Inches	Approx. Wt. per Ft., Lbs.	Net Extra for Size	Approx. Wt. Coils Lbs.
No. 22x			
½	.0499	3.25	25 to 75
⅝	.0625	2.35	25 to 75
¾	.0750	1.85	25 to 75
No. 20x			
¾	.0938	1.35	25 to 75
⅞	.1093	1.05	25 to 75
1	.1250	.95	25 to 75
1¼	.1562	.95	N.Y.
1½	.1874	.90	25 to 75
No. 19x			
1¼	.1874	.85	N.Y.
No. 18x			
¾	.1313	1.05	25 to 75
1	.1749	.75	25 to 75
1⅛	.1967	.75	N.Y.
1¼	.2187	.75	25 to 75
1½	.2624	.60	25 to 75
1¾	.3061	.60	25 to 75
2	.3498	.60	25 to 75
No. 16x			
½	.1160	1.55	12
⅝	.1450	1.05	12
¾	.1740	.90	12
1	.2320	.65	25 to 75
1¼	.2901	.65	12
1½	.3481	.50	12
2	.4641	.50	N.Y.
No. 14x			
¾	.2223	.85	12
1	.2963	.60	12

Extras for galvanizing vary and are subject to quotation. Other stock sizes can be galvanized quickly.

HOT ROLLED STRIP—GALVANIZED

(Bands in straight lengths)

Soft O. H. Steel

Hot Dip Galvanized with prime virgin zinc to A.S.T.M. Specification Test Standards—A-90-39—the Preece Test.

B.W. Ga. & Size in Inches	Approx. Wt. Per Ft., Lbs.	Stock Lgths. Ft.
No. 16x		
1	.232	12
1/8x		
½	.223	12,16
⅝	.279	16,20
¾	.335	12,16,20
1	.446	12,16,20
1¼	.558	12,16,20
1½	.669	12,16,20
1¾	.781	20
2	.890	12,16,20
2½	1.120	20
3	1.340	20
4	1.785	20

Size in Inches	Approx. Wt. Per Ft., Lbs.	Stock Lgths. Ft.
3/16x		
½	.335	20
¾	.502	16,20
1	.670	12,16,20
1¼	.837	12,16,20
1½	1.004	12,16,20
1¾	1.176	20
2	1.344	20
2½	1.669	20
2¾	1.837	20
3	2.005	20
3½	2.341	20
4	2.677	20

Galvanizing Extras vary and are subject to quotation.

PERFORATED HANGER IRON

No.	Width in Inches	Gauge	Hole Size Inches	Centers Inches	Weight Per 100 Ft. Lbs.	Stock Lgths. Ft.
00	¾	18	¼	½	12	10
1	⅞	16	¼	½	14½	10
2	1	14	⅜	⅝	24	10
3	1⅛	12	⅜	¾	32	10
4	1¼	12	⅜	¾	35	10

Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets 13[illegible] Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babb' 203
[illegible] Ro[illegible] 21
Bo[illegible] Re[illegible] 2[illegible]
Data 243
C[illegible]

PICKLED AND OILED STRIP

HOT ROLLED—STAMPING QUALITY

Shipped from our Chicago Plant

B.W. Ga. & Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
No. 16x			
½	0.110	1.55	16
¾	0.165	.90	16
⅞	0.193	.80	16
1	0.221	.65	16
1¼	0.276	.65	16
1½	0.331	.50	16
2	0.442	.50	16
2¼	0.497	.45	16
No. 14x			
1	0.282	.60	16
1/8x			
⅜	0.159	1.60	16
½	0.213	1.10	16
⅝	0.266	.75	16
¾	0.319	.60	16
⅞	0.372	.50	16
1	0.425	.40	16
1¼	0.531	.40	16
1½	0.638	.35	16

Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
1/8x			
1¾	0.744	.35	16
2	0.850	.35	16
2½	1.063	.30	16
3	1.275	.25	16
3½	1.488	.20	16
3/16x			
¾	0.478	.55	16
⅞	0.558	.45	16
1	0.638	.35	16
1¼	0.797	.35	16
1½	0.956	.30	16
2	1.280	.30	16
3	1.910	.20	16
4	2.550	.15	16
1/4x	Sq. Edge		
1	0.850	.15	16
1½	1.280	.15	16
2	1.700	.15	16
2¼	1.910	.15	16
2½	2.130	.15	16

Extras for pickling and oiling on application.

ROAD GRADER AND SCRAPER BLADES

O.H. Steel .80 to .95 Carbon

Bevel Edge (Double Bevel)

Shipped from our Chicago Plant

Size in Inches	Wt. Per Ft. Lbs.	Stock Lgth. Ft.
½ x 6	8.8	36

SPRING STEEL—SILICO MANGANESE S.A.E. 9255

FLATS—HOT ROLLED

Made under grain size control

Identification Colors: Pink and White

Suitable for heavy duty springs, as used for autos, trucks, etc. Stronger and tougher than Carbon Spring Steel. Used by most manufacturers of better grade auto springs.

Treatment—Quench in oil at 1550° F. to 1600° F. Draw to required hardness.

Size in Inches	Thickness in Inches	Wt. per Ft. Lbs.	Stock Lgths. Ft.
1/4x			
1½	.250	1.200	20,22
1¾	.250	1.440	20,22
2	.250	1.668	20,22
2½	.250	2.093	20,22
5/16x			
1½	.3125	1.400	20,22
1¾	.3125	1.800	20,22
2	.3125	2.075	20,22
2¼	.3125	2.341	20,22
2½	.3125	2.606	20,22
3	.3125	3.138	20,22

Size in Inches	Thickness in Inches	Wt. per Ft. Lbs.	Stock Lgths. Ft.
3/8x			
2	.375	2.478	20
2¼	.375	2.797	20
2½	.375	3.116	20,22
3	.375	3.753	20,22
3½	.375	4.391	20,22
5	.375	6.303	20
7/16x			
2¼	.4375	3.249	20
2½	.4375	3.621	20
1/2x			
4	.500	6.672	N.Y. 20

SPRING STEEL—S.A.E. 1095

FLATS—HOT ROLLED

Open Hearth—Round Edge

Identification Colors: Red and Yellow

A general purpose spring steel that fills many requirements when inexpensive material is desired.

Random lengths, 14 ft. to 22 ft., depending upon size.

Gauge and Size in Inches	Wt. Per Ft., Lbs.	Net Size Extra
No. 16 (.062)		
3/8	N.Y. .083	12.00
1/2	.106	8.00
5/8	N.Y. .138	8.00
3/4	.159	1.50
7/8	N.Y. .186	1.50
1	.213	1.50
1 1/8	N.Y. .240	1.50
1 1/4	.266	1.50
1 1/2	.319	1.50
1 3/4	N.Y. .372	1.50
2	.426	1.50
2 1/2	N.Y. .532	1.50
6	N.Y. 1.29	3.00
3/32x 1/2	Chgo. .159	Spec.
3/4	N.Y. .239	1.50
1	N.Y. .319	1.50
1 1/4	N.Y. .398	1.50
1 1/2	N.Y. .478	1.50
1/8x 3/8	N.Y. .151	12.00
1/2	.213	4.00
5/8	.266	4.00
3/4	.311	1.50
7/8	.364	1.50
1	.417	1.50
1 1/8	N.Y. .470	1.50
1 1/4	.523	1.50
1 1/2	.629	1.50
1 3/4	.744	1.50
2	.842	1.50
2 1/4	N.Y. .952	1.50
2 1/2	1.063	1.50
3	1.275	1.50
3 1/2	N.Y. 1.488	2.25
4	N.Y. 1.700	2.25
6	N.Y. 2.500	2.25
3/16x 3/8	N.Y. .238	10.50
1/2	.319	4.00
5/8	N.Y. .381	4.00
3/4	.478	.50
7/8	.558	.50
1	.620	.50
1 1/8	N.Y. .702	.50
1 1/4	.779	.50
1 1/2	.938	.50
1 3/4	1.116	.50
2	1.257	.50
2 1/4	N.Y. 1.430	.50
2 1/2	1.594	.50
3	1.913	.50
3 1/2	2.231	.50
4	2.550	.50
5	N.Y. 3.188	.50
1/4x 1/2	N.Y. .393	1.00
5/8	N.Y. .504	1.00

Size in Inches	Wt. Per Ft., Lbs.	Net Size Extra
1/4x 3/4	.605	.50
7/8	.712	.50
1	.818	.20
1 1/8	N.Y. .929	.20
1 1/4	1.030	Base
1 3/8	Chgo. 1.140	"
1 1/2	1.243	"
1 3/4	1.455	"
2	1.668	"
2 1/4	1.880	"
2 1/2	2.093	"
3	2.518	"
3 1/2	N.Y. 2.943	"
4	N.Y. 3.368	"
4 1/2	N.Y. 3.793	"
5	N.Y. 4.218	"
6	5.068	"
9/32x 1 3/4	1.690	Base
2	1.930	"
2 1/2	2.414	"
3	2.895	"
5/16x 3/4	N.Y. .772	.50
1	N.Y. 1.013	.20
1 1/4	1.278	Base
1 3/8	Chgo. 1.430	"
1 1/2	1.544	"
1 3/4	1.809	"
2	2.075	"
2 1/4	2.341	"
2 1/2	2.606	"
3	3.138	"
3 1/2	3.719	"
4	N.Y. 4.200	"
5	Chgo. 5.313	"
6	N.Y. 6.375	"
3/8x 3/4	N.Y. .884	.50
1	N.Y. 1.203	.20
1 1/4	1.522	Base
1 1/2	1.841	"
1 3/4	2.159	"
2	2.478	"
2 1/4	2.797	"
2 1/2	3.116	"
3	3.753	"
3 1/2	4.391	"
4	5.028	"
4 1/2	Chgo. 5.740	"
5	N.Y. 6.303	"
6	N.Y. 7.578	"
7/16x2	Chgo. 2.980	Base
2 1/2	Chgo. 3.621	"
3	4.365	"
3 1/2	Chgo. 5.108	"

(Continued)

Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babb 203
Rod 21
Bo Re 2
Data 243

SPRING STEEL—S.A.E. 1095 (Cont'd)

FLATS—HOT ROLLED—(Cont'd)

Open Hearth—Round Edge

Random lengths, 14 ft. to 22 ft. depending upon size.

Size in Inches	Wt. Per Ft., Lbs.	Net Size Extra
7/16x4	Chgo. 5.852	Base
4½	Chgo. 6.690	"
5	Chgo. 7.440	"
6	Chgo. 8.930	"
1/2x1½	N.Y. 2.422	Base
1¾	Chgo. 2.975	"
2	3.272	"
2½	N.Y. 4.122	"
3	4.972	"
3½	N.Y. 5.822	"
1/2x4	6.672	Base
4½	Chgo. 7.650	"
5	Chgo. 8.500	"
5½	N.Y. 9.350	"
6	N.Y. 10.072	"
5/8x2	Chgo. 4.150	Base
2½	N.Y. 5.163	"
3	N.Y. 6.175	"
4	N.Y. 8.300	"
5	N.Y. 10.425	"
6	N.Y. 12.550	"

ROUNDS—HOT ROLLED

Random lengths, 14 ft. to 22 ft., depending upon size.

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size
1/8	N.Y. 0.042	Spec.
3/16	0.094	2.00
1/4	0.167	1.00
5/16	0.261	.70
3/8	0.376	.40
7/16	0.511	.30
1/2	0.668	.20
9/16	Chgo. 0.845	.10
5/8	1.040	.10
11/16	Chgo. 1.260	.10
3/4	1.500	Base
13/16	Chgo. 1.760	"
7/8	2.040	Base
15/16	Chgo. 2.350	"
1	2.670	"
1 1/16	Chgo. 3.010	"
1 1/8	3.380	"
1 3/16	Chgo. 3.760	"
1 1/4	4.170	"
1 3/8	Chgo. 5.05	"
1 1/2	6.010	"
1 5/8	Chgo. 7.05	.10
1 3/4	Chgo. 8.18	.10

SQUARES—HOT ROLLED

Random lengths, 14 ft. to 22 ft., depending upon size.

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	In Stock At
3/16	0.094	Spec.	N.Y.
1/4	0.213	1.00	N.Y.
5/16	0.332	.70	Chgo.
3/8	0.478	.40	N.Y.
7/16	0.651	.30	N.Y.
1/2	0.850	.20	Phil.
9/16	1.080	.15	Chgo.
5/8	1.330	.10	Phil.
3/4	1.910	Base	Phil.
7/8	2.603	"	Phil.
1	3.400	"	Phil.
1 1/8	4.300	"	Phil.
1 1/4	5.312	"	Chgo.

SPRING STEEL—COLD ROLLED

Shipped from our Chicago Plant

Identification Colors: Red and Yellow

This material is fully annealed, with controlled structure and is free from surface decarburization.

Size			Stock Lengths, Ft.
Thickness		Width	
.125	x	12 3/8	12
.0625	x	12 3/8	12
.050	x	12 3/8	12
.032	x	12 3/8	12

FLATS—BEVEL EDGE, O. H. STEEL

B.W. Ga. & Size in Inches	Weight Per Ft. Lbs.	Size and Bevel Extra	Stock Lengths Ft.	In Stock At
No. 14x ¾	.176	1.00	16	Chgo.
No. 12x ¾	.220	.85	16	"
⅞	.255	.75	16	"
1/8x1	.359	.50	12	Phil.
3/16x ⅞	.490	.60	16	Chgo.
1/4x ⅞	.584	.40	16	"
1	.691	.25	16	"
1¼	.877	.25	16	Chgo.
5/16x1¼	1.096	.40	20	Phil.
3/8x1½	1.594	.40	20	"

FLATS—GALVANIZED

O. H. Steel—Carbon .15 to .20

Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Hot Dip Galvanized with prime virgin zinc to A.S.T.M. Specification A-123-33; subjected to the Preece Test—A-90-39. Average coating not less than 2 ounces per square foot of surface.

Size in Inches	Approx. Wt. Per Ft., Lbs.	Net Extra for Size	Stock Lengths Ft.
1/4x ¾	.67	.40	20
1	.89	.15	16,20
1¼	1.11	.15	16,20
1½	1.34	.15	16,20
2	1.79	.15	16,20
2¼	2.01	.15	20
3	2.68	.15	20
3/8x ½	.67	.70	20
1½	2.01	Base	20
2	2.68	"	20
5/16x1½	1.67	.15	20
2	2.24	.15	20

Extras for galvanizing vary and are subject to quotation. Other size flats can be galvanized quickly.

FLATS—ROUND EDGE

HOT ROLLED

O. H. Steel—Carbon .15 to .20

Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Size Inches (Overall Measurement)	Weight per Ft., Lbs.	Net Extra for Size	Stock Lengths Ft.
½x2½	4.14	Base	Chgo. 16
1 x5	17.00	"	Clev. 16
1⅛x5	18.78	.20	Clev. 18
1½x6	29.06	.20	Chgo. 16

FENDER IRON, ROUND EDGE

Shipped from our New York Plant

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
⅝x4	8.15	Base	20	⅞x5	14.50	Base	20
¾x4	9.80	"	20	⅞x6	17.24	"	20
¾x5	12.42	"	20				

For weight of various length bars, see tables in back of book.

Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Bir. Tub Babb' 203
Rod 21
Bol Re 2
Data 243

TIRE STEEL—ROUND EDGE

Machine Straightened—10' 6" to 16' lengths.

Size, Inches Face Measurement	Weight Per Ft. Lbs.	Net Extra for Size
3/16 x 3/4	.520	.55
1	.679	.35
1/4 x 3/4	Chgo. .712	.40
7/8	.818	.30
1	.924	.15
1 1/8	1.030	.15
1 1/4	N.Y. 1.136	.15
5/16 x 7/8	Chgo. 1.046	.30
1	Chgo. 1.179	.15
1 1/8	1.311	.15
1 1/4	1.444	.15
1 3/8	Bost. 1.580	.15
3/8 x 1	Chgo. 1.442	Base
1 1/4	1.761	"
1 1/2	2.080	"
1 3/4	2.400	"
2	2.717	"
2 1/2	N.Y. 3.355	"
7/16 x 1 1/2	Bost. 2.460	"
1/2 x 1 1/2	2.847	"
1 5/8	3.060	"
1 3/4	3.272	"
1 7/8	Bost. 3.490	"
2	3.697	"

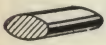
Size, Inches Face Measurement	Wt. Per Ft. Lbs.	Net Extra for Size
1/2 x 2 1/2	4.547	Base
3	5.397	"
4	7.097	"
5/8 x 1 1/2	3.652	"
1 5/8	3.917	"
1 3/4	4.183	"
1 7/8	4.450	"
2	4.714	"
2 1/4	Bost. 5.250	"
2 1/2	5.777	"
3	6.839	"
4	Bost. 8.960	"
3/4 x 1 3/4	5.012	"
2	5.649	"
2 1/4	6.287	"
2 1/2	6.924	"
3	8.199	"
7/8 x 2	6.720	"
2 1/2	8.208	"
2 3/4	8.952	"
3	9.695	"
1 x 2 1/2	9.373	"

HEXAGONS—SOFT BESSEMER—S.A.E. 1112 HOT ROLLED

Free Cutting Screw Quality

Size in Inches	Wt. Per Ft., Lbs.	Net Extra for Size	Stock Lgths. Ft.
3/8	.414	.90	Chgo. 16
1/2	.736	.35	20
9/16	.932	.35	20,22
5/8	1.150	.20	20,22
11/16	1.392	.20	20,22
3/4	1.656	.125	20,22
13/16	1.94	.125	N.Y. 20
7/8	2.254	.125	20,22
15/16	2.59	.125	N.Y. 20
1	2.945	.125	20,22
1 1/16	3.324	.125	20,22
1 1/8	3.727	.125	20,22
1 3/16	4.152	.125	20,22
1 1/4	4.601	.125	20,22
1 3/8	5.567	.125	20,22

Size in Inches	Wt. Per Ft., Lbs.	Net Extra for Size	Stock Lgths. Ft.
1 7/16	6.085	.125	20,22
1 1/2	6.625	.125	20,22
1 5/8	7.775	.25	20,22
1 3/4	9.018	.25	20,22
1 13/16	9.673	.25	20,22
1 7/8	10.352	.25	20,22
2	11.778	.25	20,22
2 1/16	14.100	.25	20,22
2 1/4	14.907	.25	20,22
2 3/8	16.609	.25	20,22
2 1/2	18.403	.25	20,22
2 5/8	20.289	.25	20
2 3/4	22.268	.25	20,22
3	26.500	.25	20,22



OVALS—HOT ROLLED

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
1/2 x 1/4	.297	1.00	N.Y. 20
5/8 x 1/8	.464	.50	12, N.Y. 20
3/8	.570	.50	N.Y. 20
3/4 x 3/8	.668	.30	12

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
7/8 x 7/16	.909	.30	12
1 x 1/2	1.19	.30	N.Y. 20
1 1/4 x 5/8	1.86	.30	N.Y. 20

HALF ROUNDS HOT ROLLED

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.	Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
3/8	.188	1.75	12,14,16,20	1 1/4	2.086	.50	14,20,22
1/2	.334	1.25	12,20,22	1 1/2	3.004	.50	14,20,22
5/8	.522	1.00	12,20,22	1 3/4	4.089	.50	20,22
3/4	.751	.75	12,20,22	2	5.340	.50	20,22
7/8	1.022	.65	20,22	2 1/2	8.345	.50	20,22
1	1.335	.65	12,20,22	3	12.016	.50	20,22
1 1/8	1.690	.50	N.Y. 20				

Cutting to special lengths, see extras in back of book.

HALF ROUNDS—GALVANIZED

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Hot Dip Galvanized with prime virgin zinc to A.S.T.M. Specification A-123-33; subjected to the Preece Test—A-90-39. Average coating not less than 2 ounces per square foot of surface.

Size in Inches	Approx. Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.	Size in Inches	Approx. Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
3/8	.197	1.75	20	1 1/4	2.190	.50	20
1/2	.350	1.25	20	1 1/2	3.154	.50	20
5/8	.588	1.00	20	1 3/4	4.294	.50	20
3/4	.788	.75	20	2	5.607	.50	20
7/8	1.073	.65	20	2 1/2	8.778	.50	20
1	1.402	.65	20	3	12.617	.50	20

The extras for galvanizing vary and are subject to quotation.

HALF OVALS—GALVANIZED

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Hot Dip Galvanized with prime virgin zinc to A.S.T.M. Specification A-123-33; subjected to the Preece Test—A-90-39. Average coating not less than 2 ounces per square foot of surface.

Size in Inches	Approx. Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lengths Ft.
3/8 x 3/32	.121	2.00	20
1/2 x 1/8	.156	1.20	20
5/8 x 5/32	.244	.90	20
3/16	.299	.90	20
3/4 x 1/16	.351	.70	20
7/8 x 3/16	.404	1.40	20
7/32	.478	.70	20
1/4	.551	.70	20
1 x 1/4	.624	.40	20
1 1/4 x 5/16	.974	.40	20
1 1/2 x 3/8	1.404	.40	20
1/2	1.935	.40	20
1 3/4 x 1/16	1.91	.40	20
2 x 3/8	1.834	.40	20
1/2	2.50	.40	20
2 1/2 x 5/8	3.899	.40	20
3 x 3/4	5.614	.40	20

Extras for galvanizing vary and are subject to quotation.
Cutting extras in back of book.

Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets 13
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babb 203
Rod 21
Bo Re 2
Data 243
C

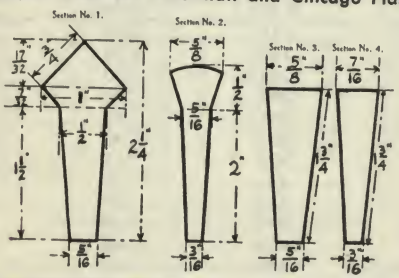
HALF OVALS HOT ROLLED

O. H. Steel—Carbon .15 to .20
Manganese .30 to .60 Phosphorus .045 max. Sulphur .05 max.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths Ft.
3/8 x 3/32	.115	2.00	12, N.Y. 20
1/2 x No. 12	.128	1.60	Det. 16
1/8	.149	1.20	12,16,20
5/8 x 1/8	.183	1.20	N.Y. 20
5/32	.232	.90	16,20
3/16	.285	.90	12,14,16,20
1/4	.396	.90	Det. 16
3/4 x 3/16	.334	.70	12,14,16,20
1/4	.460	.70	20
7/8 x 3/16	.385	1.40	20
3/32	.455	.70	12,20
1/4	.527	.70	16,20
1 x 3/16	.437	1.00	N.Y. 20
1/4	.594	.40	12,16,20
5/16	.761	.40	N.Y. 20
3/8	.939	.40	N.Y. 20
1 1/8 x 1/4	.662	.40	N.Y. 20
5/16	.843	.40	Det. 16
1 1/4 x 3/16	.541	1.00	20
1/4	.731	.80	N.Y. 20
5/16	.928	.40	12,18,20
3/8	1.136	.80	N.Y. 20
1 1/2 x 1/4	.869	.80	N.Y. 20
5/16	1.099	.40	N.Y. 20
3/8	1.337	.40	14,18,20
1/2	1.843	.40	20,22
1 3/4 x 7/16	1.82	.40	20
2 x 3/8	1.747	.40	20,22
1/2	2.38	.40	14,20
2 1/2 x 1/2	2.92	.40	N.Y. 20
5/8	3.713	.40	20,22
3 x 5/8	4.394	.40	N.Y. 20
3/4	5.347	.40	20

STANDARD COAL SCREEN BARS

Shipped from our Cincinnati and Chicago Plants



Section	Wt. Per Ft. Lbs.	Stock Lengths., Ft. and Inches
No. 1	3.53	12'2" and 14'2"
No. 2	2.20	12'2" and 14'2"
No. 3	2.81	12'2" and 14'2"
No. 4	1.90	12'2" and 14'2"

LEWIS ENGINE BOLT IRON

Identification Colors: Red and Green

A.S.T.M. A-189-39T—Grade A; A.A.R. M-302-37—Grade A

A high grade refined iron for such applications as chain, hooks, commercial staybolts, U-bolts, mine car parts, etc., where service is severe. A hand puddled iron of uniform quality, free from scrap or impurities. Resists corrosion, welds readily, and is very tough and ductile.

ROUNDS

Random lengths of 16′ to 18′

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size
½	.654	.20	1⅜	4.950	Base
⅝	1.023	.10	1½	5.890	"
¾	1.473	.05	1⅝	Chgo. 6.913	"
⅞	2.004	.05	1¾	8.018	"
1	2.618	Base	2	10.47	.20
1⅛	3.313	"	2¼	Chgo. 13.25	.20
1¼	4.091	"	2½	Chgo. 16.36	.20

FLATS

Shipped from our Chicago Plant

Size in Inches	Weight Per Ft.	Net Size Extra
1 x 3	10.00	Base

LEWIS SPECIAL STAYBOLT IRON

Identification Colors: Red and White.

A.S.T.M. A-84-39, Grade A; A.A.R. M-305-36; A.S.M.E. S16. Stock inspected by R. W. Hunt & Company.

Tensile strength 47,000 to 52,000 lbs. per sq. in.; minimum elongation in 8 in., 30%; minimum reduction of area 48%.

This is the highest grade of refined iron. Manufactured primarily for locomotive staybolts from pure pig iron of known analysis. It is a hand puddled product, thoroughly worked, doubly refined and slab piled. It is very tough and ductile, with a long, silky, fibrous texture. Free from seams, scabs and other imperfections.

ROUNDS

Random Lengths of 15′ to 18′ 6″

Size in Inches	In Stock At	Net Extra for Size	Size in Inches	In Stock At	Net Extra for Size	Size in Inches	In Stock At	Net Extra for Size
¾	N.Y.	.05	1⅛	N.Y.	Base	1½	Chgo.	Base
⅞	"	.05	1 3/16	Chgo.	"	1⅝	"	"
15/16	"	.05	1¼	N.Y.	"	1¾	"	"
1	"	Base	1 5/16	Chgo.	"	2	"	.20
1 1/16	"	"	1⅜	"	"			

Lewis Iron and Lewis Special Iron can be furnished promptly from mill in the following sizes:
Rounds, ½" to 4½" inclusive.
Squares, ½" to 4½" inclusive.
Hexagons, ⅝" to 3" inculsive.
Flats, 1¼"x¼" to 6"x2" inclusive.

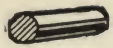
LEWIS SPECIAL SOLID STAYBOLTS

Shipped from our New York Plant

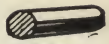
Stock lengths, 36 inches. This is length of body and does not include head which is 1 inch long.

Stock Sizes	½	⅝	¾	⅞	15/16	1
List Price, per Ft.	$0.36	$0.40	$0.60	$0.80	$1.00	$1.00
Stock Sizes	**1 1/16**	**1⅛**	**1¼**	**1⅜**	**1½**	
List Price, per Ft.	**$1.30**	**$1.30**	**$1.50**	**$1.80**	**$2.00**	

Cold Fin. Bars 65
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Bir. Tub Babbi 203
Rod 21
Bo Re 2
Data 243



COLD FINISHED SHAFTING



Moltrup Quality

All sizes shown up to and including 2⅞" are carried in Drawn Bars. Many, but not all of these sizes, are also carried in Turned and Polished. All sizes 2 1/16" and larger are Turned and Polished.

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
1/16	.010	3.00	10-12
5/64	.016	3.00	10-12
3/32	.024	3.00	10-12
7/64	.032	2.50	10-12
1/8	.042	1.30	10-12
9/64	.053	1.30	10-12
5/32	.065	1.30	10-12
11/64	.079	1.30	10-12
3/16	.094	1.10	10-12,16,20
13/64	.110	1.10	10-12
7/32	.128	1.10	10-12
15/64	.147	1.10	10-12
1/4	.167	1.00	10-12,16,20
17/64	.189	1.00	10-12
9/32	.211	1.00	10-12,16,20
19/64	.235	1.00	10-12
5/16	.261	.90	10-12,16,20
21/64	.288	.90	10-12
11/32	.316	.90	10-12
23/64	.345	.90	10-12
3/8	.376	.85	10-12,16,20
.380	.386	.85	10-12
25/64	.408	.85	10-12
13/32	.441	.85	10-12
27/64	.475	.85	10-12
7/16	.511	.85	10-12,16,20
29/64	.548	.85	10-12
15/32	.587	.85	10-12
31/64	.627	.85	10-12
1/2	.668	.80	10-12,16,20
33/64	.710	.80	10-12
17/32	.754	.80	10-12
35/64	.799	.80	10-12
9/16	.845	.80	10-12,16,20
37/64	.893	.80	10-12
19/32	.942	.80	10-12
39/64	.992	.80	10-12
5/8	1.04	.70	10-12,16,20
41/64	1.10	.70	10-12
21/32	1.15	.70	10-12
43/64	1.21	.70	10-12
11/16	1.26	.60	10-12,16,20
45/64	1.32	.60	10-12
23/32	1.38	.60	10-12
47/64	1.44	.60	10-12
3/4	1.50	.60	10-12, 16,20,24
49/64	1.57	.60	10-12
25/32	1.63	.60	10-12
51/64	1.70	.60	10-12
13/16	1.76	.55	10-12,16,20
27/32	1.90	.55	10-12
7/8	2.05	.55	10-12, 16,20,24
29/32	2.19	.55	10-12
15/16	2.35	.55	10-12, 16,20,24
31/32	2.51	.55	10-12
1	2.67	.55	10-12, 16,20,24
1 1/32	2.84	.55	Chgo. 12
1 1/16	3.01	.55	10-12, 16,20,24
1 1/8	3.38	.55	10-12, 16,20,24
1 3/16	3.77	.55	10-12, 16,20,24
1 1/4	4.17	.55	12,16,20,24
1 5/16	4.69	.55	12,16,20,24
1 3/8	5.05	.55	12,16,20,24
1 7/16	5.52	.55	12,16,20,24
1 1/2	6.01	.60	12,16,20,24
1 9/16	6.52	.60	12,16,20,24
1 5/8	7.05	.60	12,16,20,24
1 11/16	7.60	.60	12,16,20,24
1 3/4	8.18	.60	12,16,20,24
1 13/16	8.77	.60	12,16,20,24
1 7/8	9.39	.60	12,16,20,24
1 15/16	10.02	.60	12,16,20,24
2	10.68	.60	12,16,20,24
2 1/16	11.36	.65	12,16,20,24
2 1/8	12.06	.65	12,16,20,24
2 3/16	12.78	.65	12,16,20,24
2 1/4	13.52	.65	12,16,20,24
2 5/16	14.28	.65	12,16,20,24
2 3/8	15.06	.65	12,16,20,24
2 7/16	15.87	.65	12,16,20,24
2 1/2	16.69	.65	12,16,20,24
2 9/16	17.53	.80	12,16,20,24
2 5/8	18.40	.80	12,16,20,24
2 11/16	19.29	.80	12,16,20,24
2 3/4	20.20	.80	12,16,20,24
2 13/16	21.12	.80	12,16,20,24
2 7/8	22.07	.80	12,16,20,24
2 15/16	23.04	.80	12,16,20,24
3	24.03	.80	12,16,20,24
3 1/16	25.04	.90	12,16,20,24
3 1/8	26.08	.90	12,16,20,24
3 3/16	27.13	.90	12,16,20,24
3 1/4	28.21	.90	12,16,20,24
3 5/16	29.30	.90	12,16,20,24
3 3/8	30.42	.90	12,16,20,24
3 7/16	31.55	1.00	12,16,20,24
3 1/2	32.71	1.00	12,16,20,24
3 9/16	33.89	1.00	12,16,20,24
3 5/8	35.09	1.00	12,16,20,24
3 11/16	36.31	1.00	12,16,20,24
3 3/4	37.55	1.00	12,16,20,24

(Continued)

Cutting extras in back of book.

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glad to be

CUSTOMER
H. F. Haze
J. J. Colli
W. H. Bas
C. H. Terr
R. G. Spar
C. R. Hires

SHIPPING
W. J. Win
R. J. Youn
H. A. Wal
H. C. Burr

COLD FINIS
F. W. Eich
W. H. Bas

TUBULAR
F. W. Eich
J. J Collin

For EM
H. F. HA
W. J. WI

COLD FINISHED SHAFTING

Moltrup Quality

All sizes $2\frac{15}{16}$" and larger are Turned and Polished

Size in Inches	Wt. Per Ft., Lbs.	Net Extra for Size	Stock Lgths., Ft.
(Continued)			
$3\frac{13}{16}$	38.81	1.15	12,16,20,24
$3\frac{7}{8}$	40.13	1.15	12,16,20,24
$3\frac{15}{16}$	41.40	1.15	12,16,20,24
4	42.73	1.15	12,16,20,24
$4\frac{1}{16}$	44.07	1.15	20
$4\frac{1}{8}$	45.44	1.15	12,16,20,24
$4\frac{3}{16}$	46.83	1.25	12,16,20,24
$4\frac{1}{4}$	48.23	1.25	12,16,20,24
$4\frac{5}{16}$	49.66	1.25	20
$4\frac{3}{8}$	51.11	1.25	12,16,20,24
$4\frac{7}{16}$	52.58	1.25	12,16,20,24
$4\frac{1}{2}$	54.08	1.35	12,16,20,24
$4\frac{9}{16}$	55.59	1.35	Chgo. 20
$4\frac{5}{8}$	57.12	1.35	12,16,20,24
$4\frac{11}{16}$	58.68	1.35	12,16,20,24
$4\frac{3}{4}$	60.25	1.35	12,16,20,24
$4\frac{13}{16}$	61.84	1.35	20
$4\frac{7}{8}$	63.46	1.35	12,16,20,24
$4\frac{15}{16}$	65.10	1.45	12,16,20,24
5	66.76	1.45	12,16,20,24
$5\frac{1}{16}$	68.44	1.45	Chgo. 20
$5\frac{1}{8}$	70.14	1.45	12,16,20,24
$5\frac{3}{16}$	71.86	1.45	12,16,20,24
$5\frac{1}{4}$	73.60	1.45	12,16,20,24
$5\frac{5}{16}$	75.36	1.45	12,16,20,24
$5\frac{3}{8}$	77.15	1.45	20
$5\frac{7}{16}$	78.95	1.95	12,16,20,24
$5\frac{1}{2}$	80.78	1.95	12,16,20,24
$5\frac{5}{8}$	84.49	1.95	12,16,20,24
$5\frac{3}{4}$	88.30	1.95	12,16,20,24
$5\frac{7}{8}$	92.17	1.95	20
$5\frac{15}{16}$	94.14	2.40	12,16,20,24
6	96.13	2.40	12,16,20,24
$6\frac{1}{4}$	104.31	2.40	10-12,20
$6\frac{1}{2}$	112.82	3.25	10-12,16,20
$6\frac{3}{4}$	121.78	4.25	20
7	130.85	4.25	10-12,16,20
$7\frac{1}{2}$	150.21	5.50	10-12,16, N.Y. 20
8	170.90	5.50	20
9	216.30	Spec.	N.Y. 20
10	267.00	"	N.Y. 16

Cutting extras in back of book.

SPECIAL COLD DRAWN SHAPES

Moltrup Quality

Special Cold Drawn Shapes can be furnished promptly. Cold drawing shapes to specification, often makes it possible to save considerable time and money in the manufacture of intricate or irregular shaped parts.

Stressproof 70
Screw Steel 71
High Carbon 74
Ledloy 77
Rycase 79
Flats 83
Cold Fin. Bars 65
Alloys 89
Heat Treat Alloys 117
Tool Steel 123
Sheets
Spec Shee 157
Stainle 167
Tubi 189
Blr. Tub Babbi 203
Ro 21
Bo Re 2
Data 243

TURNED, GROUND AND POLISHED SHAFTING

COLD FINISHED—KEYWAY STOCK

Identification Colors: Red and White

Suitable for line and special machinery shafts requiring accuracy, straightness and concentricity. Danger from warpage is largely eliminated due to lack of strain generally existing in the ordinary grades of shafting.

Carbon content of .25 to .35 gives additional strength.

Tolerances

1⅛" to 2 7/16" exact size to not more than .002" under.
2½" and larger exact size to not more than .003" under.

Size in Inches	Wt. Per Ft. Lbs.	Net Size & Finish Extra	Stock Lgths., Ft.
1⅛	3.38	2.15	20
1 3/16	3.77	1.90	16,20,24
1¼	4.17	1.90	16,20,24
1 5/16	4.60	1.90	16,20,24
1⅜	5.05	1.90	16,20,24
1 7/16	5.52	1.90	16,20,24
1½	6.01	1.95	16,20,24
1 9/16	6.52	1.70	20,24
1⅝	7.05	1.70	20,24
1 11/16	7.60	1.70	16,20,24
1¾	8.18	1.70	16,20,24
1 13/16	8.77	1.70	20
1⅞	9.39	1.70	20
1 15/16	10.02	1.35	16,20,24
2	10.68	1.35	16,20,24
2 1/16	11.36	1.40	N.Y. 20
2⅛	12.06	1.40	16,20
2 3/16	12.78	1.40	20,24
2¼	13.52	1.40	20,24
2 5/16	14.28	1.40	16,20,24
2⅜	15.06	1.40	20
2 7/16	15.87	1.40	16,20,24
2½	16.69	1.40	16,20,24
2 9/16	17.53	1.55	20
2⅝	18.40	1.55	20
2 11/16	19.29	1.55	20
2¾	20.20	1.55	16,20,24
2 13/16	21.12	1.55	20
2⅞	22.07	1.55	20
2 15/16	23.04	1.10	16,20,24
3	24.03	1.10	16,20,24
3 1/16	25.04	1.20	20
3⅛	26.08	1.20	20
3 3/16	27.13	1.20	20
3¼	28.21	1.20	20
3 5/16	29.30	1.20	20
3⅜	30.42	1.20	20
3 7/16	31.55	1.30	20,24
3½	32.71	1.30	20
3⅝	35.09	1.30	20
3 11/16	36.31	1.30	20
3¾	37.55	1.30	20
3 13/16	38.81	1.45	20
3⅞	40.13	1.45	20
3 15/16	41.40	1.45	20
4	42.73	1.45	16,20,24
4⅛	45.44	1.55	20
4 3/16	46.83	1.55	20
4¼	48.23	1.55	20
4 5/16	49.66	1.55	N.Y. 20
4⅜	51.11	1.55	20
4 7/16	52.58	1.55	20,24
4½	54.08	1.65	20
4⅝	57.12	1.65	20
4 11/16	58.68	1.65	20
4¾	60.25	1.65	20
4⅞	63.46	1.65	20
4 15/16	65.10	1.75	20
5	66.76	1.75	20
5⅛	70.14	1.75	20
5 3/16	71.86	1.75	20
5¼	73.60	1.75	20
5 7/16	78.95	2.25	20
5½	80.78	2.25	20
5⅝	84.48	2.25	20
5¾	88.30	2.25	20
5 15/16	94.14	2.70	20
6	96.13	2.70	20

Cutting extras in back of book.

For weight of various length bars, see tables in back of book.

TURNED, GROUND AND POLISHED SHAFTING S.A.E. 1040—1045

Identification Color: Golden Brown

This quality of shafting is made from S.A.E. 1040 steel which has a higher tensile strength, around 95,000 pounds per square inch. It is used for line and special machinery shafting requiring a greater degree of strength. It is the very highest quality shafting, is truly concentric and straight. It has a perfectly smooth and mirror finish and as it is not cold drawn will take machining and keyseating without the slightest danger of warping.

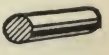
Tolerances

1⅛" to 2 7/16" exact size to not more than .002" under.

2½" and larger exact size to not more than .003" under.

Size in Inches	Wt. Per Ft. Lbs.	Net Size & Finish Extra	Stock Lgths. Ft.
1⅛	3.38	2.55	16,20
1 3/16	3.77	2.10	16,20,24
1¼	4.17	2.10	16,20,24
1 5/16	4.60	2.10	20
1⅜	5.05	2.10	20,24
1 7/16	5.52	2.10	16,20,24
1½	6.01	2.15	16,20,24
1 9/16	6.52	2.00	16,20
1⅝	7.05	2.00	16,20,24
1 11/16	7.60	2.00	20,24
1¾	8.18	2.00	20,24
1 13/16	8.77	2.00	20
1⅞	9.39	2.00	20,24
1 15/16	10.02	1.55	16,20,24
2	10.68	1.55	16,20,24
2 1/16	11.36	1.60	20
2⅛	12.06	1.60	20,24
2 3/16	12.78	1.60	16,20,24
2¼	13.52	1.60	16,20,24
2⅜	15.06	1.60	16,20,24
2 7/16	15.87	1.60	20,24
2½	16.69	1.60	16,20,24
2 9/16	17.54	1.75	N.Y. 20
2⅝	18.40	1.75	20,24
2 11/16	19.29	1.75	16,20,24
2¾	20.20	1.75	20,24
2 13/16	21.12	1.75	Chgo. 20
2⅞	22.07	1.75	20,24
2 15/16	23.04	1.25	16,20,24
3	24.03	1.25	20,24
3⅛	26.08	1.35	N.Y. 20
3¼	28.21	1.35	20,24
3⅜	30.42	1.35	20,24
3 7/16	31.55	1.45	20,24
3½	32.71	1.45	16,20,24
3¾	37.55	1.45	20,24
3 15/16	41.40	1.60	20
4	42.73	1.60	20,24
4 7/16	52.58	1.70	20,24
4½	54.08	1.80	N.Y. 20
4 15/16	65.10	1.90	N.Y. 20
5	66.76	1.90	20
5 7/16	78.95	2.40	Chgo. 20

TURNED AND POLISHED SHAFTING



Moltrup Quality

Size in Inches	Wt. Per Ft. Lbs.	Net Size & Finish Extra	Stock Lgths. Ft.
1 3/16	3.77	1.60	16,20,24
1¼	4.17	1.60	16,20,24
1 5/16	4.60	1.60	16,20,24
1⅜	5.05	1.60	16,20,24
1 7/16	5.52	1.60	16,20,24
1½	6.01	1.65	16,20,24
1 9/16	6.52	1.40	20,24
1⅝	7.05	1.40	20,24
1 11/16	7.60	1.40	16,20,24
1¾	8.18	1.40	16,20,24
1 13/16	8.77	1.40	20
1⅞	9.39	1.40	20
1 15/16	10.02	1.05	16,20,24
2	10.68	1.05	16,20,24
2 1/16	11.36	1.10	20
2⅛	12.06	1.10	16,20
2 3/16	12.78	1.10	20,24
2¼	13.53	1.10	20,24
2 5/16	14.28	1.10	16,20,24
2⅜	15.06	1.10	20
2 7/16	15.87	1.10	16,20,24
2½	16.69	1.10	16,20,24
2 9/16	17.54	1.25	20
2⅝	18.40	1.25	20
2 11/16	19.29	1.25	20
2¾	20.20	1.25	16,20,24
2 13/16	21.12	1.25	20
2⅞	22.07	1.25	20

For sizes over 2⅞" diameter, see Cold Finished Shafting list. Cutting extras in back of book.

Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets 12
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babbi 203
Rod 21
Bol Re 2
Data 243

GROUND AND POLISHED SHAFTING—S.A.E. 1112

Moltrup Quality

Identification Color: Red

A screw stock quality used for musical instruments, radio parts and other extreme precision requirements demanding utmost accuracy and polished finish. Suitable for nickel plating.

Tolerance

Exact size to not more than .002" minus.

Size in Inches	Wt. Per Ft. Lbs.	Net Size & Finish Extra	Stock Lgths. Ft.
1/8	.042	13.30	12
5/32	.065	11.30	12
3/16	.094	7.10	12
7/32	.128	7.10	12
1/4	.167	5.00	12
9/32	.211	5.00	12
5/16	.261	3.90	12
3/8	.376	2.85	12
13/32	.441	2.85	12
7/16	.511	2.35	12
1/2	.668	2.30	12
9/16	.845	2.15	12
5/8	1.043	2.05	12,20
11/16	1.262	1.85	12
3/4	1.502	1.85	12,20
13/16	1.763	1.75	12,16
7/8	2.045	1.75	12,20
15/16	2.347	1.75	12,16,20
1	2.670	1.75	12,20
1 1/16	3.015	1.75	12,16
1 1/8	3.380	1.70	12,20
1 3/16	3.77	1.90	12,20
1 1/4	4.17	1.90	12,20
1 5/16	4.60	1.90	12,20
1 3/8	5.05	1.90	12,20
1 7/16	5.52	1.90	12,20
1 1/2	6.01	1.95	12,20
1 5/8	7.05	1.70	12,20
1 3/4	8.18	1.70	12,20
1 7/8	9.39	1.70	12,20
2	10.68	1.35	12,20

Sizes over 2" selected from our Turned, Ground and Polished Shafting Stock.

When special accuracy to tolerance plus or minus .0005" is required, the following special accuracy extras will be added:

1/8" to 1/2" diameter, inclusive.....$0.75
9/16" to 1" diameter, inclusive..... 1.00
1 1/16" to 1 1/8" diameter, inclusive..... 1.25

GROUND AND POLISHED ACCURACY STOCK S.A.E. 1040—1045

This special finish steel has higher physical properties due to the higher carbon content. Especially adaptable for parts requiring greater strength, as bolts, axles, studs, shafts, spindles, etc. Machines smoothly, but lower speeds must be used. Can be bent and swaged, under proper heat treatment.

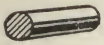
Tolerance

Exact size to not more than .002" minus.

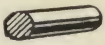
Size in Inches	Wt. Per Ft. Lbs.	Size & Finish Extra	Stock Lgths. Feet
1/4	.167	6.75	N.Y.
5/16	.261	5.40	20
3/8	.376	4.10	20
7/16	.511	3.45	20
1/2	.668	2.65	20
9/16	.845	3.50	20
5/8	1.043	2.40	20
11/16	1.262	3.15	20
3/4	1.502	2.15	20
13/16	1.763	3.05	N.Y.
7/8	2.045	2.05	20
15/16	2.350	2.05	N.Y.
1	2.670	2.05	20
1 1/8	3.380	2.00	20

When special accuracy to tolerance plus or minus .0005" is required, the special accuracy extras shown for Ground and Polished S.A.E. 1112 above, will be added.

Cutting extras in back of book.



CUMSCO TURNED, GROUND AND POLISHED SHAFTING—S.A.E. X1335



Shipped from our Cincinnati and Buffalo Plants

Identification Colors: Gold and Red

Cumsco quality shafting has the same desirable features in regard to accuracy, straightness and finish that exists in all Cumberland grades. In addition the analysis of this stock permits a higher tensile strength, approximately 90,000 lbs., making the material particularly adaptable for machine tool parts such as lead screws.

Tolerances

1⅛" to 2 7/16" exact size to not more than .002" under.

2½" and larger exact size to not more than .003" under.

Size in Inches	Wt. Per Ft. Lbs.	Net Size & Finish Extra	Stock Lgths. Ft.	Size in Inches	Wt. Per Ft. Lbs.	Net Size & Finish Extra	Stock Lgths. Ft.
1⅛	3.38	2.55	20*	2 7/16	15.87	1.60	20*
1 3/16	3.77	2.10	20*	2½	16.69	1.60	20*
1¼	4.17	2.10	20*	2⅝	18.41	1.75	20
1 5/16	4.60	2.10	20	2 11/16	19.29	1.75	20*
1⅜	5.05	2.10	20	2¾	20.20	1.75	20
1 7/16	5.52	2.10	20*	2⅞	22.09	1.75	20
1½	6.01	2.15	20*	2 15/16	23.04	1.25	20*
1⅝	7.05	2.00	20*	3	24.03	1.25	20*
1 11/16	7.60	2.00	20*	3¼	28.23	1.35	20
1¾	8.18	2.00	20*	3 7/16	31.55	1.45	20*
1 13/16	8.77	2.00	Chgo. 12	3½	32.71	1.45	20
1⅞	9.39	2.00	20	3¾	37.57	1.45	20
1 15/16	10.02	1.55	20*	3 15/16	41.40	1.60	20
2	10.68	1.55	20*	4	42.73	1.60	20
2 3/16	12.78	1.60	20*	4½	54.08	1.80	20
2¼	13.52	1.60	20	5	66.76	1.90	20
2⅜	15.06	1.60	20				

Most sizes can be furnished in 12 ft. lengths from our Chicago plant.

* These sizes available from both Cincinnati and Buffalo plants. Balance of sizes from Cincinnati plant only.

Sizes not listed can be furnished promptly.

GROUND AND POLISHED ACCURACY STOCK S.A.E. X1335

Shipped from our Buffalo Plant

Identification Colors: Gold and Red

Tolerance

Exact size to not more than .0005" plus or minus

Size in Inches	Wt. Per Ft. Lbs.	Size, Accy. & Finish Extra	Stock Lgths. Ft.	Size in Inches	Wt. Per Ft. Lbs.	Size, Accy. & Finish Extra	Stock Lgths. Ft.
1/16	.094	13.50	12	¾	1.502	4.45	12
¼	.167	9.65	12	⅞	2.045	4.30	12
5/16	.261	7.65	12	15/16	2.347	4.30	12
⅜	.376	5.75	12	1	2.670	4.30	12
7/16	.511	4.75	12	1 1/16	3.010	4.70	Chgo. 12
½	.668	4.70	12	1⅛	3.380	4.60	Chgo. 12
⅝	1.043	4.75	12	1 3/16	3.770	4.55	Chgo. 12
11/16	1.262	4.45	12	1¼	4.170	4.55	Chgo. 12

Cutting extras in back of book.

Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets 12[illegible]
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub Babbi 203
[illegible]eldir Rod 21
Bo Re 2[illegible]
Data 243
C[illegible]

STRESSPROOF STEEL No. 2

Cold Drawn—Dark Finish

Shipped from our Chicago and Detroit Plants

Identification Colors: Orange and Brown

A new steel—A new method of processing—Entirely new results

Strength: The minimum yield point of Stressproof is 100,000 lbs. per square in. for all sizes listed. Hardness and physical properties are uniform from outside to center. Hardness is about 255 Brinell.

Machinability: Surface cutting speeds of from 130 to 160 feet per minute are recommended.

Warping: Stressproof may be keyseated, splinted, threaded, broached, turned, or milled without distortion. Expensive straightening operations are eliminated.

Surface Wear: Stressproof, although easily machined, possesses remarkable wear resisting properties. In spite of its relative softness, it has in many cases equalled the performance of case hardened steels.

Uses: Spindles—arbors—spline shafts—feed and lead screws of all kinds—worm gears—propeller shafts—pump shafts—collets, etc.

Size Tolerances: 1" round and smaller, +.000" to —.006"; over 1" round to 2", +.000" to —.008".

ROUNDS

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.	Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
1/2	.668	.80	12	1 5/16	4.60	.55	12
9/16	.845	.80	12	1 3/8	5.05	.55	12
5/8	1.04	.70	12	1 7/16	5.52	.55	12
11/16	1.26	.60	12	1 1/2	6.01	.60	12
3/4	1.50	.60	12	1 9/16	6.52	.60	12
13/16	1.76	.55	12	1 5/8	7.05	.60	12
7/8	2.04	.55	12	1 11/16	7.60	.60	12
15/16	2.35	.55	12	1 3/4	8.18	.60	12
1	2.67	.55	12	1 13/16	8.77	.60	12
1 1/16	3.01	.55	12	1 7/8	9.39	.60	12
1 1/8	3.38	.55	12	1 15/16	10.02	.60	12
1 3/16	3.77	.55	12	2	10.68	.60	12
1 1/4	4.17	.55	12				

This stock includes bars 10 to 12 ft. which will be furnished occasionally unless you indicate that all 12 ft. bars are desired.

COLD DRAWN STEEL ANGLES

Sides are right angles, and corners square, sharp, and free from fillet.

Accurately cold drawn to within the commercial variations of Cold Drawn Steel, eliminating the necessity of machining to get a true working surface.

Size in Inches	Wt. Per Ft. Lbs.	Stock Lgths. Ft.	Size in Inches	Wt. Per Ft. Lbs.	Stock Lgths. Ft.
1/2x 1/2x 1/8	.38	N.Y. 20	1 1/4x1 1/4x 3/16	1.48	20
5/8x 5/8x 1/8	.48	20	1 1/2x1 1/2x 1/8	1.23	20
3/4x 3/4x 1/8	.59	20	1 1/2x1 1/2x 3/16	1.80	20
1 x 5/8x 1/8	.64	N.Y. 20	2 x2 x 1/8	1.65	20
1 x1 x 1/8	.80	20	2 x2 x 3/16	2.44	20
1 1/4x1 1/4x 1/8	1.01	N.Y. 20	2 1/2x2 1/2x 3/16	3.07	N.Y. 20

SCREW STEEL—COLD FINISHED

Moltrup Quality

BESSEMER S.A.E. 1112

A Bessemer free cutting steel which has long been accepted as the standard for screw steels. Used for machined parts and fittings made under fast cutting tools on screw machines or automatics.

BESSEMER HIGH SPEED—S.A.E. X1112

A Bessemer steel of higher sulphur content, permitting greater speeds and feeds in cutting. Sulphur content .20 to .30. Can be cyanide hardened.

INLAND LEDLOY 1115

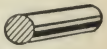
Inland Ledloy 1115, one of the new lead bearing open hearth steels, machines 30% to 60% better than standard S.A.E. 1115. It machines more easily than high sulphur Bessemer Screw stock (S.A.E. X1112). Strength, ductility and resistance to impact are unchanged within the limits of accuracy in testing.

Ledloy 1115 can be carburized and treated in the same manner as ordinary carbon S.A.E. 1115. It quenches to the same hardness and draws back to the same physical properties. Used for gears, crank shafts, pinions, spindles, spline shafts, etc.

OPEN HEARTH S.A.E. X1314, RYCASE

An open hearth, high manganese, low carbon, case carburizing steel. Also suitable for light deforming operations, broaching and nibbing. This steel has a machinability rating within 5% of Bessemer screw stock.

Bessemer S.A.E. 1112—Bessemer High Speed, S.A.E. X1112—
O. H. Ledloy 1115—O. H. S.A.E. X1314, Rycase



See Machinability ratings in back of book.

Identification Colors: S.A.E. 1112—White; Bessemer High Speed, S.A.E. X1112—Orange; Ledloy 1115—Blue and White; S.A.E. X1314, Rycase—Gold.

ROUNDS

All sizes $2\frac{15}{16}$" and larger are Turned and Polished.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet — Bessemer S.A.E. 1112	Bessemer High Speed S.A.E. X1112	Ledloy O. H. 1115	O. H. S.A.E. X1314 Rycase
1/16	.010	3.00	10-12	10-12		
5/64	.016	3.00	10-12	....	..	..
3/32	.023	3.00	10-12	10-12	..	..
7/64	.032	2.50	10-12	Clev.	..	..
1/8	.042	1.30	10-12	10-12	N.Y. 12	..
9/64	.053	1.30	10-12	N.Y. 12		
5/32	.065	1.30	10-12	10-12	N.Y. 12	..
11/64	.079	1.30	10-12	10-12	..	..
3/16	.094	1.10	10-12,16,20	10-12	12	12
13/64	.110	1.10	10-12	10-12	..	..
7/32	.128	1.10	10-12	10-12	N.Y. 12	
15/64	.147	1.10	10-12	10-12	..	..
1/4	.167	1.00	10-12,20	10-12	12	12
17/64	.189	1.00	10-12	10-12	..	..
9/32	.211	1.00	10-12,16,20	10-12	N.Y. 12	Buff. 12
19/64	.236	1.00	10-12	10-12		

(Continued)

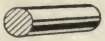
Chemical and cutting extras in back of book.

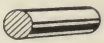
Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets 12[illegible]
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tub/ Babbi 203
[illegible]ain Rod 21[illegible]
Bol Rei 2[illegible]
Data 243
C[illegible]

SCREW STEEL—COLD FINISHED

Moltrup Quality

ROUNDS





All sizes $2\frac{15}{16}$" and larger are Turned and Polished

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet — Bessemer S.A.E. 1112	Bessemer High Speed S.A.E. X1112	Ledloy O. H. 1115	O. H. S.A.E. X1314 Rycase
(Continued)						
5/16	.261	.90	10-12,16,20	10-12	12	12
21/64	.288	.90	10-12	10-12	..	..
11/32	.316	.90	10-12	10-12	..	Chgo. 12
23/64	.345	.90	10-12	....	..	..
3/8	.375	.85	10-12,16,20	10-12	12	12
.380	.386	.85	10-12	.....	.....	.....
25/64	.408	.85	10-12	10-12	..	..
13/32	.441	.85	10-12	10-12	Chgo. 12	..
27/64	.476	.85	10-12	10-12	.	..
7/16	.511	.85	10-12,16,20	10-12	12	12
29/64	.549	.85	10-12	.....	.....	.....
15/32	.587	.85	12	10-12	Chgo. 12	..
31/64	.627	.85	10-12	10-12	..	..
1/2	.668	.80	10-12,16,20	10-12	12	12
35/64	.799	.80	10-12	N.Y. 12	..	..
17/32	.754	.80	10-12	10-12	Chgo. 12	....
35/64	799	.80	10-12	N.Y. 12	..	..
9/16	.854	.80	10-12,16,20	10-12	12	12
37/64	.893	.80	10-12	10-12	..	..
19/32	.942	.80	10-12	10-12	..	..
39/64	.992	.80	10-12	10-12	.....	.....
5/8	1.04	.70	10-12,16,20,24	10-12	12	12
41/64	1.10	.70	10-12	10-12	..	..
21/32	1.15	.70	10-12	10-12	..	..
43/64	1.21	.70	10-12	....	..	..
11/16	1.26	.60	10-12,16,20	10-12	N.Y. 12	12
23/32	1.38	.60	12	10-12	..	..
47/64	1.44	.60	10-12	N.Y. 12	..	..
3/4	1.50	.60	10-12,16,20,24	10-12	12	12
49/64	1.57	.60	10-12	....	..	..
25/32	1.63	.60	10-12,20	10-12	Chgo. 12	....
51/64	1.70	.60	10-12	....	..	..
13/16	1.76	.55	10-12,16,20	10-12	12	12
27/32	1.90	.55	10-12	10-12	..	..
7/8	2.04	.55	10-12,16,20,24	10-12	12	12
29/32	2.19	.55	10-12	10-12	.....	.....
15/16	2.35	.55	10-12,16,20,24	10-12	..	12
31/32	2.51	.55	10-12	10-12	..	..
1	2.67	.55	10-12,16,20,24	10-12	12	12
1-1/32	2.84	.55	Chgo. 12	N Y. 12	..	..
1-1/16	3.02	.55	10-12,16,20,24	10-12	N.Y. 12	12
1-1/8	3.39	.55	10-12,16,20,24	10-12	12	12
1-3/16	3.77	.55	10-12,16,20,24	10-12	12	12
1-1/4	4.17	.55	12,16,20,24	12	12	12
1-5/16	4.60	.55	12,16,20,24	12	Chgo. 12	12
1-3/8	5.05	.55	12,16,20,24	12	12	12
1-7/16	5.52	.55	12,16,20,24	12	12	12
1-1/2	6.01	.60	12,16,20,24	12	12	12
1-9/16	6.54	.60	12,16,20,24	12	..	12
1-5/8	7.05	.60	12,16,20,24	12	N.Y. 12	12
1-11/16	7.60	.60	12,16,20,24	12	N.Y. 12	12

(Continued)

SCREW STEEL—COLD FINISHED

Moltrup Quality

ROUNDS

All sizes $2\frac{15}{16}$" and larger are Turned and Polished

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet — Bessemer S.A.E. 1112	Bessemer High Speed S.A.E. X1112	Ledloy O. H. 1115	O. H. S.A.E. X1314 Rycase
(Continued)						
1-3/4	8.18	.60	12,20,24	12	N.Y. 12	12
1-13/16	8.77	.60	12,20	12	N.Y. 12	12
1-7/8	9.39	.60	12,20,24	12	N.Y. 12	12
1-15/16	10.03	.60	12,20,24	12	..	12
2	10.69	.60	12,20	12	N.Y. 12	12
2-1/16	11.36	.65	12	12		12
2-1/8	12.06	.65	12	12	Chgo. 12	12
2-3/16	12.79	.65	12	12	N.Y. 12	12
2-1/4	13.52	.65	12	12	N.Y. 12	12
2-5/16	14.29	.65	12,20	N Y. 12	..	12
2-3/8	15.07	.65	12,20	12		12
2-7/16	15.87	.65	12,16,20,24	N.Y. 12	..	12
2-1/2	16.70	.65	12,20	12	N.Y. 12	12
2-9/16	17.53	80	20	..	..	12
2-5/8	18.41	.80	12,20	..	N.Y. 12	12
2-11/16	19.29	.80	20			12
2-3/4	20.21	.80	12,20	12	N.Y 12	12
2-13/16	21.14	.80	12	12	..	12
2-7/8	22.09	.80	12,20	N.Y. 12	..	12
2-15/16	23.04	.80	12	N.Y. 12	N.Y. 12	12
3	24.05	.80	12	12	N.Y. 12	12
3-1/16	25.04	.90	12	..	..	Chgo. 12
3-1/8	26.10	.90	12	..	..	12
3-3/16	27.13	.90	..	..	..	Chgo. 12
3-1/4	28.21	.90	12	12	..	12
3-5/16	29.30	.90	12			Chgo. 12
3-3/8	30.42	.90	12	..	..	12
3-7/16	31.55	1.00	..	..	..	Buff. 12
3-1/2	32.71	1.00	12	12	..	12
3-5/8	35.09	1.00	12	..	..	12
3-3/4	37.55	1.00	12			12
3-7/8	40.10	1.15	12	..	..	12
4	42.73	1.15	12	..	..	12
4-1/8	45.44	1.15	12	..	..	12
4-1/4	48.23	1.25	12	..	..	12
4-3/8	51.11	1.25	12			N.Y. 12
4-1/2	54.08	1.35	12	..	..	12
4-5/8	57.17	1.35	12	..	..	12
4-3/4	60.25	1.35	12	..	..	12
4-7/8	63.46	1.35	12			
5	66.76	1.45	12	..	..	12
5-1/4	73 60	1.45	12	..	..	12
5-1/2	80.78	1.95	12	..	..	Buff. 12
5-3/4	88.30	1.95	12	..	..	Chgo. 12
6	96.13	2.40	12			12

Many intermediate and larger sizes can be furnished from mill. Cutting extras in back of book.

For weight of various length bars, see tables in back of book.

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COLD FINISHED ROUNDS

Moltrup Quality

STANDARD OPEN HEARTH—S.A.E. 1020

A standard open hearth steel for case carburized parts where strength is not a factor. The lack of free machining in its natural state offers some limitation to use in mass production.

OPEN HEARTH—S.A.E. X1020

A low carbon case hardening steel. Balancing manganese with the other elements in this steel results in greater homogeneity, density and normality than is found in commercial quality S.A.E. 1020. Machinability is considerably improved.

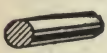
S.A.E. 1040—1045

These steels represent the higher carbon range in the open hearth carbon field. Their natural physical property advantages over lower carbon steels prove particularly valuable for shafting and similar applications. Good heat treatment response makes these qualities useful for studs and special bolts. S.A.E. 1040 will machine to a much smoother finish than S.A.E. 1020. The high carbon in S.A.E. 1045 results in one of the strongest steels of the carbon grades (excluding alloy steels).

S.A.E. X1335

A comparatively free machining steel suitable for automatic or hand screw machine parts and other applications where fairly high strength and fast, clean machining are required. X1335 responds to heat treatment with more uniform results than steels of lower manganese content. Greater resistance to wear is an additional feature.

O. H. S.A.E. 1020—X1020—1040—1045
S.A.E. X1335, High Carbon, High Manganese



Identification Colors: S.A.E. 1020, X1020—Green; S.A.E. 1040, 1045—Yellow; S.A.E. X1335—Red and Gold.

All sizes $2\frac{15}{16}$" and larger are Turned and Polished

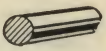
Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet: O. H. S.A.E. 1020 X1020	S.A.E. 1040 1045	S.A.E. X1335 High Carbon High Mang.
1/8	.042	1.30	N.Y. 12		
5/32	.065	1.30	Chgo. 12	..	..
3/16	.094	1.10	10-12	12	..
1/4	.167	1.00	10-12	16	N.Y. 12
5/16	.261	.90	10-12	16	12
3/8	.376	.85	10-12	10,12,16	12
7/16	.511	.85	10-12	10,12,16	12
1/2	.668	.80	10-12	10,12,16	12
9/16	.845	.80	10-12	10,12,16	12
5/8	1.04	.70	10-12	10,12,16	12
11/16	1.26	.60	10-12	10,12,16	N.Y. 12
3/4	1.50	.60	10-12	10,12,16	12
13/16	1.76	.55	10-12,*16	10,12,16	12
7/8	2.04	.55	10-12	10,12,16	12
15/16	2.35	.55	10-12,*16	10,12,16	N.Y. 12

(Continued)

* Shipped from our Cleveland Plant.

Cutting extras in back of book.

COLD FINISHED ROUNDS



Moltrup Quality

All sizes $2\frac{15}{16}$" and larger are Turned and Polished

Extras shown below apply to S.A.E. 1020 and X1020. For S.A.E. 1040, 1045 and X1335, $2\frac{15}{16}$" and larger, add 15c for turning and polishing.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet O. H. S.A.E. 1020 X1020	S.A.E. 1040 1045	S.A.E. X1335 High Carbon High Mang.
(Continued)					
1	2.67	.55	10-12	10,12,20	12
1-1/16	3.01	.55	10-12,*16	10,12,16	12
1-1/8	3.38	.55	10-12	10,12,16	12
1-3/16	3.77	.55	*16, N.Y. 20	10,12,16,20,24	12
1-1/4	4.17	.55	12	10,12,20	12
1-5/16	4.60	.55	12, Clev. 20	10,12,16,20,24	12
1-3/8	5.05	.55	12	10,12,20,24	12
1-7/16	5.52	.55	12,16,20,24	10,12,16,20,24	Chgo. 12
1-1/2	6.01	.60	12, N.Y. 20, 24	10,12,20,24	12
1-9/16	6.52	.60	12,*16	10,12,16,20,24	Chgo. 12
1-5/8	7.05	.60	12	10,12,20,24	12
1-11/16	7.60	.60	12,16,20,24	10,12,16,20,24	Chgo. 12
1-3/4	8.18	.60	12,16,20,24	10,12,20,24	12
1-13/16	8.77	.60	12,16,20,24	10,12,16,20,24	12
1-7/8	9.39	.60	12,16,20,24	10,12,20,24	12
1-15/16	10.02	.60	12,16,20,24	10,12,20,24	Chgo. 12
2	10.68	.60	12,16,20,24	10,12,20,24	12
2-1/16	11.36	.65	12,16,20,24	10,12,20,24	..
2-1/8	12.06	.65	12,16,20,24	10,12,20,24	N.Y. 12
2-3/16	12.78	.65	12,16,20,24	10,12,20,24	..
2-1/4	13.52	.65	12,16,20,24	10,12,20,24	12
2-5/16	14.28	.65	12,16,20,24	10,12,20,24	..
2-3/8	15.06	.65	12,16,20,24	10,12,20,24	N.Y. 12
2-7/16	15.87	.65	12,16,20,24	10,12,20,24	..
2-1/2	16.69	.65	12,16,20,24	10,12,20,24	N.Y. 12
2-9/16	17.53	.80	12,16,20,24	10,12,20,24	.....
2-5/8	18.40	.80	12,16,20,24	10,12,20,24	..
2-11/16	19.29	.80	12,16,20,24	10,12,20,24	..
2-3/4	20.20	.80	12,16,20,24	10,12,20,24	..
2-13/16	21.12	.80	12,16,20,24	10,12,20,24	..
2-7/8	22.07	.80	12,16,20,24	10,12,20,24	.....
2-15/16	23.04	.80	12,16,20,24	10,12,20,24	Chgo. 12
3	24.03	.80	12,16,20,24	10,12,20,24	N.Y. 12
3-1/16	25.04	.90	12,16,20,24	10,12,20,24	..
3-1/8	26.08	.90	12,16,20,24	10,12,20,24	..
3-3/16	27.13	.90	12,16,20,24	N.Y. 20	.....
3-1/4	28.21	.90	12,16,20,24	10,12,20,24	..
3-5/16	29.30	.90	12,16,20,24	10,12,20,24	..
3-3/8	30.42	.90	12,16,20,24	10,12,20,24	..
3-7/16	31.55	1.00	12,16,20,24	10,12,20	..
3-1/2	32.71	1.00	12,16,20,24	10,12,20,24	.....
3-9/16	33.89	1.00	12,16,20,24	..	..
3-5/8	35.09	1.00	12,16,20,24	10,12,20,24	..
3-11/16	36.31	1.00	12,16,20,24	10,12,20,24	..
3-3/4	37.55	1.00	12,16,20,24	10,12,20,24	..
3-13/16	38.81	1.15	12,16,20,24	.....	.....
3-7/8	40.13	1.15	12,16,20,24	10,12,20,24	..
3-15/16	41.40	1.15	12,16,20,24	10,12,20	..
4	42.73	1.15	12,16,20,24	10,12,20,24	..
4-1/16	44.07	1.15	20	..	..
4-1/8	45.44	1.15	12,16,20,24	10,12,20,24	.....
(Continued)					

* Shipped from our Cleveland Plant.
Cutting extras in back of book.

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COLD FINISHED ROUNDS

Moltrup Quality

All sizes $2\frac{15}{16}$" and larger are Turned and Polished

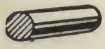
Extras shown below apply to S.A.E. 1020 and X1020. For S.A.E. 1040 and 1045, $2\frac{1}{16}$" and larger, add 15c for turning and polishing.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet: O. H. S.A.E. 1020 X1020	S.A.E. 1040 1045	S.A.E. X1335 High Carbon High Mang.
(Continued)					
4-3/16	46.83	1.25	12,16,20,24	N.Y. 20	
4-1/4	48.23	1.25	12,16,20,24	10,12,20,24	..
4-5/16	49.66	1.25	20	..	..
4-3/8	51.15	1.25	12,16,20,24	10,12,20,24	..
4-7/16	52.58	1.25	12,16,20,24	N.Y. 20	
4-1/2	54.08	1.35	12,16,20,24	10,12,20,24	..
4-9/16	55.59	1.35	Chgo. 20	..	..
4-5/8	57.17	1.35	12,16,20,24	10,12,20,24	..
4-11/16	58.68	1.35	12,16,20,24	Chgo. 20	..
4-3/4	60.25	1.35	12,16,20,24	10,12,20,24	
4-13/16	61.84	1.35	20	..	..
4-7/8	63.46	1.35	12,16,20,24	Chgo. 20	..
4-15/16	65.10	1.45	12,16,20,24	N.Y. 20	..
5	66.76	1.45	12,16,20,24	10,12,20	..
5-1/16	68.44	1.45	Chgo. 20		
5-1/8	70.14	1.45	12,16,20,24	..	..
5-3/16	71.86	1.45	12,16,20,24	..	..
5-1/4	73.60	1.45	12,16,20,24	N.Y. 20	..
5-5/16	75.36	1.45	12,16,20,24	..	..
5-3/8	77.15	1.45	20		
5-7/16	78.95	1.95	12,16,20,24	N.Y. 20	..
5-1/2	80.78	1.95	12,16,20,24	10,12,20,24	..
5-5/8	84.49	1.95	12,16,20,24	..	..
5-3/4	88.30	1.95	12,16,20,24	10,12,20,24	..
5-7/8	92.17	1.95	20		
5-15/16	94.14	2.40	12,16,20,24	N.Y. 20	..
6	96.13	2.40	12,16,20,24	10,12,20,24	..
6-1/4	104.31	2.40	10-12,20	Chgo. 20	..
6-1/2	112.82	3.25	10-12,16,20	Chgo. 20	..
6-3/4	121.78	4.25	20		
7	130.85	4.25	10-12,16,20	Chgo. 20	..
7-1/2	150.21	5.50	10-12,16,N.Y. 20	..	..
8	170.90	5.50	10-12,16,20	..	..
9	216.30	Spec.	N.Y. 20	..	..
10	267.00	"	N.Y. 16		

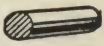
AN AID FOR STEEL USERS

The increased production speeds and improved manufacturing standards of the last few years have emphasized the need for greater uniformity and higher quality in steels.

Ryerson began work on this problem several years ago. By tightening specifications and making inspections more rigid, we gradually built up stocks of these better steels. Today we are in a position to definitely and unequivocally certify to the known high quality and uniformity of all steel in stock.



COLD FINISHED ROUNDS



LEDLOY 1040—1045—1115

(Lead-bearing O. H. Steel)

Identification Colors: Ledloy 1040, 1045—Yellow; Ledloy 1115—Blue and White.

Extras shown below apply to S.A.E. 1115. For S.A.E. 1040 and 1045, $2\frac{15}{16}$" and larger, add 15c for turning and polishing.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet		
			Ledloy O. H. 1040	Ledloy O. H. 1045	Ledloy O. H. 1115
1/8	.042	1.30			Chgo. 12
5/32	.065	1.30	..	..	Chgo. 12
3/16	.094	1.10	12	12	12
7/32	.128	1.10	..	..	Chgo. 12
1/4	.167	1.00	16	16	12
9/32	.211	1.00			N.Y. 12
5/16	.261	.90	16	16	12
3/8	.376	.85	16	16	12
13/32	.411	.85	..	..	Chgo. 12
7/16	.511	.85	16	16	12
1/2	.668	.80	16	16	12
17/32	.754	.80	..	..	Chgo. 12
9/16	.845	.80	16	16	12
5/8	1.04	.70	16	16	12
11/16	1.26	.60	16	16	N.Y. 12
3/4	1.50	.60	16	16	12
25/32	1.63	.60	..	..	Chgo. 12
13/16	1.76	.55	16	16	12
7/8	2.04	.55	16	16	12
15/16	2.35	.55	16	16	..
1	2.67	.55	20	20	12
1-1/16	3.01	.55	16	16	Chgo. 12
1-1/8	3.38	.55	16	16	12
1-3/16	3.77	.55	20	20	12
1-1/4	4.17	.55	20	20	12
1-5/16	4.60	.55	16	16	N.Y. 12
1-3/8	5.05	.55	20	20	12
1-7/16	5.52	.55	16	16	12
1-1/2	6.01	.60	20	20	12
1-9/16	6.52	.60	16	16	..
1-5/8	7.05	.60	20	20	N.Y. 12
1-11/16	7.60	.60	16	16	Chgo. 12
1-3/4	8.18	.60	20	20	N.Y. 12
1-13/16	8.77	.60	16	16	..
1-7/8	9.39	.60	20	20	N.Y. 12
1-15/16	10.02	.60	20	20	
2	10.68	.60	20	20	N.Y. 12
2-1/16	11.36	.65	20	20	..
2-1/8	12.06	.65	20	20	Chgo. 12
2-3/16	12.78	.65	20	20	..
2-1/4	13.52	.65	20	20	Chgo. 12
2-5/16	14.28	.65	20	20	..
2-3/8	15.06	.65	20	20	..
2-7/16	15.87	.65	20	20	..
2-1/2	16.69	.65	20	20	Chgo. 12
2-5/8	18.40	.80	20	20	Chgo. 12
2-11/16	19.29	.80	20	20	..
2-3/4	20.20	.80	20	20	Chgo. 12
2-13/16	21.12	.80	20	20	..
2-7/8	22.07	.80	20	20	
2-15/16	23.04	.80	20	20	Chgo. 12
3	24.03	.80	20	20	Chgo. 12
3-1/8	26.08	.90	20	20	..
3-3/16	27.13	.90	N.Y. 20	N.Y. 20	

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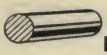
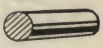
Bol Rei 24
Data 243



COLD FINISHED ROUNDS



LEDLOY 1040—1045—1115—(Cont'd)

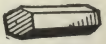
Extras shown below apply to S.A.E. 1115. For S.A.E. 1040 and 1045, $2\frac{15}{16}$" and larger, add 15c for turning and polishing .

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet: Ledloy O. H. 1040	Ledloy O. H. 1045	Ledloy O. H. 1115
(Continued)					
3-1/4	28.21	.90	20	20	..
3-3/8	30.42	.90	20	20	..
3-7/16	31.55	1.00	20	20	..
3-1/2	32.71	1.00	20	20	..
3-5/8	35.09	1.00	20	20	..
3-11/16	36.31	1.00	20	20	..
3-3/4	37.55	1.00	20	20	..
3-7/8	40.13	1.15	Chgo. 20	Chgo. 20	..
3-15/16	41.40	1.15	20	20	..
4	42.73	1.15	20	20	..
4-1/8	45.44	1.15	Chgo. 20	Chgo. 20	..
4-3/16	46.83	1.25	N.Y. 12	N.Y. 12	..
4-1/4	48.23	1.25	20	20	..
4-3/8	51.15	1.25	20	20	..
4-7/16	52.58	1.25	N.Y. 20	N.Y. 20	..
4-1/2	54.08	1.35	20	20	..
4-5/8	57.12	1.35	Chgo. 20	Chgo. 20	..
4-11/16	58.68	1.35	Chgo. 20	Chgo. 20	..
4-3/4	60.25	1.35	20	20	..
4-7/8	63.52	1.35	Chgo. 20	Chgo. 20	..
4-15/16	65.10	1.45	N.Y. 12	N.Y. 12	..
5	66.76	1.45	20	20	..
5-1/4	73.60	1.45	N.Y. 20	N.Y. 20	..
5-7/16	78.95	1.95	N.Y. 12	N.Y. 12	..
5-1/2	80.78	1.95	20	20	..
5-3/4	88.99	1.95	20	20	..
5-15/16	94.14	2.40	N.Y. 12	N.Y. 12	..
6	96.13	2.40	20	20	..
6-1/4	104.31	2.40	Chgo. 20	Chgo. 20	..
6-1/2	112.82	3.25	Chgo. 20	Chgo. 20	..
7	130.85	3.25	Chgo. 20	Chgo. 20	..

COLD FINISHED HEXAGONS

LEDLOY 1040—1045—1115

Shipped from our Chicago Plant



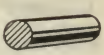
Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet: Ledloy O. H. 1040	Ledloy O. H. 1045	Ledloy O. H. 1115
3/8	.414	1.75	..	..	12
7/16	.564	1.25	..	..	12
1/2	.736	.90	12	12	12
9/16	.932	.80	12	12	12
5/8	1.15	.70	12	12	12
3/4	1.66	.60	12	12	12
7/8	2.25	.55	12	12	12
15/16	2.59	.55	12	12	..
1	2.94	.50	12	12	12
1-1/8	3.73	.45	12	12	..
1-1/4	4.60	.45	12	12	..
1-5/16	5.07	.50	12	12	..
1-3/8	5.57	.50	12	12	..
1-7/16	6.09	.50	..	..	12
1-1/2	6.63	.60	12	12	..
1-5/8	7.78	.60	12	12	..
1-3/4	9.02	.60	12	12	..
1-7/8	10.35	.60	12	12	..
2	11.77	.75	12	12	..

RYCASE—COLD FINISHED

S.A.E. X1314

Moltrup Quality

ROUNDS



Identification Color: Gold

A cold finished low carbon high manganese case carburizing steel having a machinability rating within 5% of Bessemer screw stock. When substituted for ordinary O. H. case hardening steels, it increases production 30% to 40%.

When heat treated, Rycase possesses physical properties surpassed only by the more costly alloy steels. In normal state, without heat treatment, it provides a better steel due to refinements secured by additional manganese and special method of manufacture.

Rycase fulfills in every way the demand for a highly refined case carburizing steel without sacrificing machinability. Case is hard, deep, and uniform. Core is tough and ductile without being brittle. Rycase will withstand bending, broaching, nibbing and other heavy deforming operations without cracking.

Rycase can be heat treated according to the general practice for case carburizing steels, and will respond satisfactorily to heat treating, carburizing and cyaniding. Quality extra 20c per 100 lbs.

All sizes up to and including 2 7/8" are Drawn bars. All sizes 2 15/16" and larger are Turned and Polished.

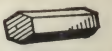
Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
3/16	.094	1.10	N.Y.
1/4	.167	1.00	12
9/32	.211	1.00	Buff.
5/16	.261	.90	12
11/32	.316	.90	Chgo.
3/8	.376	.85	12
7/16	.511	.85	12
1/2	.668	.80	12
9/16	.845	.80	12
5/8	1.04	.70	12
11/16	1.26	.60	12
3/4	1.50	.60	12
13/16	1.76	.55	12
7/8	2.04	.55	12
15/16	2.35	.55	12
1	2.67	.55	12
1 1/16	3.01	.55	12
1 1/8	3.38	.55	12
1 3/16	3.77	.55	12
1 1/4	4.17	.55	12
1 5/16	4.60	.55	12
1 3/8	5.05	.55	12
1 7/16	5.52	.55	12
1 1/2	6.01	.60	12
1 9/16	6.52	.60	12
1 5/8	7.05	.60	12
1 11/16	7.60	.60	12
1 3/4	8.18	.60	12
1 13/16	8.77	.60	12
1 7/8	9.39	.60	12
1 15/16	10.02	.60	12
2	10.68	.60	12
2 1/16	11.36	.65	12
2 1/8	12.06	.65	12
2 3/16	12.78	.65	N.Y.
2 1/4	13.52	.65	12
2 5/16	14.28	.65	Bost.
2 3/8	15.06	.65	12
2 7/16	15.87	.65	10-12
2 1/2	16.69	.65	12
2 9/16	17.53	.80	10-12
2 5/8	18.40	.80	10-12
2 11/16	19.29	.80	10-12
2 3/4	20.20	.80	12
2 13/16	21.12	.80	10-12
2 7/8	22.07	.80	10-12
2 15/16	23.04	.80	12
3	24.03	.80	12
3 1/16	25.04	.90	Chgo.
3 1/8	26.08	.90	10-12
3 3/16	27.13	.90	Chgo.
3 1/4	28.21	.90	10-12
3 5/16	29.30	.90	Bost.
3 3/8	30.42	.90	10-12
3 7/16	31.55	1.00	Buff.
3 1/2	32.71	1.00	10-12
3 5/8	35.09	1.00	12
3 3/4	37.55	1.00	10-12
3 7/8	40.10	1.15	Chgo.
4	42.73	1.15	12
4 1/8	45.44	1.15	N.Y.
4 1/4	48.23	1.25	"
4 3/8	51.11	1.25	"
4 1/2	54.08	1.35	"
4 5/8	57.12	1.35	"
4 3/4	60.25	1.35	"
5	66.76	1.45	12
5 1/4	73.60	1.45	Chgo.
5 1/2	80.78	1.95	Buff.
5 3/4	88.30	1.95	Chgo.
6	96.13	2.40	"

Cutting extras in back of book.

Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets 12
Spec. Sheets 157
Stainless 167
Tubing 189
Bir. Tub Babbi 203
Rod 21
Bol Rei 2
Data 243

COLD FINISHED HEXAGONS

Moltrup Quality



Bessemer S.A.E. 1112—X1112—Rycase High Manganese, X1314—O. H. S.A.E. 1020—X1020—1120—1040—1045

Identification Colors: S.A.E. 1112—White; S.A.E. X1112—Orange; Rycase High Manganese, X1314—Gold; S.A.E. 1020, X1020,—Green; S.A.E. 1120—Black; S.A.E. 1040, 1045—Yellow.

Size in Inches	Wt. per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet: Bessemer S.A.E. 1112	Bessemer S.A.E. X1112	Rycase High Mang. X1314	Open Hearth S.A.E. 1120	Open Hearth S.A.E. 1020 X1020	Open Hearth S.A.E. *1040 *1045
1/8	.046	5.00	10-12	10-12	.....	.....	.....	.....
5/32	.072	5.00	10-12	....	....	....	....	..
3/16	.103	4.00	10-12	10-12	....	....	....	..
7/32	.141	4.00	10-12	....	....	....	....	..
1/4	.184	2.50	10-12	10-12	10-12	....	10-12	..
9/32	.233	2.50	10-12	.....	.....	.....	.....	.....
5/16	.287	2.50	10-12	10-12	....	....	10-12	..
11/32	.348	2.50	Chgo.	....	....	....	....	..
3/8	.414	1.75	10-12	10-12	10-12	....	10-12	..
7/16	.564	1.25	10-12,20	10-12	10-12	....	10-12	..
1/2	.734	.90	10-12,20.	10-12	.10-12	.....	.10-12	..12
9/16	.932	.80	10-12,20	10-12	10-12	....	10-12	12
19/32	1.04	.80	10-12	....	....	....	....	..
5/8	1.15	.70	10-12	10-12	10-12	....	10-12	12
11/16	1.39	.60	10-12	10-12	10-12	....	10-12	..
3/4	1.66	.60	10-12,20†.	10-12	.10-12	.....	.10-12	..12
13/16	1.94	.60	10-12,20	10-12	10-12	....	10-12	..
7/8	2.25	.55	10-12	10-12	10-12	....	10-12	12
15/16	2.59	.55	10-12	10-12	10-12	....	10-12	12
1	2.94	.50	10-12,20†	10-12	10-12	....	10-12	12
1-1/16	3.32	.50	10-12	10-12	.10-12	.....	.10-12	....
1-1/8	3.73	.45	10-12	10-12	10-12	....	10-12	12
1-3/16	4.15	.45	10-12	10-12	10-12	....	10-12	..
1-1/4	4.60	.45	10-12,20†	10-12	10-12	....	10-12	12
1-5/16	5.07	.50	10-12,20	10-12	10-12	....	10-12	12
1-3/8	5.57	.50	10-12	10-12	.10-12	.....	.10-12	..12
1-7/16	6.09	.50	10-12	10-12	10-12	....	10-12	..
1-1/2	6.63	.60	10-12,20†	10-12	10-12	....	10-12	12
1-9/16	7.19	.60	10-12	....	....	10-12	....	..
1-5/8	7.78	.60	10-12	Clev.	10-12	10-12	10-12	12
1-11/16	8.39	.60	10-12	.....	.....	10-12	.....	.....
1-3/4	9.02	.60	10-12	....	10-12	10-12	10-12	12
1-13/16	9.67	.60	10-12	....	....	10-12	10-12	..
1-7/8	10.35	.60	10-12	....	....	10-12	10-12	12
1-15/16	11.05	.75	10-12	....	....	10-12	10-12	..
2	11.77	.75	10-12,20†	.....	10-12	.10-12	.10-12	..12
2-1/16	12.53	.75	....	....	....	10-12	....	..
2-1/8	13.29	.75	....	....	10-12	10-12	10-12	..
2-3/16	14.09	.75	....	....	....	10-12	....	..
2-1/4	14.91	1.00	....	....	10-12	10-12	10-12	..
2-5/16	15.76	1.00	.....	.....	.....	10-12	.....	.....

(Continued)

* Shipped from our New York Plant.

† This 20' length shipped from our New York Plant.

For weight of various length bars, see tables in back of book.

COLD FINISHED HEXAGONS

Moltrup Quality

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet: Bessemer S.A.E. 1112	Bessemer S.A.E. X1112	Rycase High Mang. X1314	Open Hearth S.A.E. 1120	Open Hearth S.A.E. 1020 X1020	Open Hearth S.A.E. *1040 *1045
(Continued)								
2-3/8	16.61	1.00	.....	.....	10-12	10-12	12,20†	...
2-7/16	17.51	1.00	....	....	....	10-12	....	..
2-1/2	18.40	1.00	....	....	10-12	10-12	12,20†	..
2-9/16	23.29	1.00	....	....	....	N.Y.	....	..
2-5/8	20.29	1.00	....	Clev.	....	10-12	....	..
2-3/4	22.26	1.00	....	Clev.	10-12	10-12	....	..
2-7/8	24.38	1.50	....	10-12	12,20†	....	....	..
3	26.30	1.50	....	....	....	10-12	....	..
3-1/8	28.75	3.00	....	....	....	10-12	....	..
3-1/4	31.10	3.00	....	....	....	10-12	....	..
3-1/2	36.07	3.00	....	....	....	10-12	....	..
4	47.11	4.00	.....	.....	.....	10-12	.....	.....

* Shipped from our Chicago Plant.

† These 20 ft. lengths shipped from our New York Plant.

LEDLOY HEXAGONS—COLD FINISHED

See Page 78

COLD FINISHED SQUARES

Moltrup Quality

Bessemer S.A.E. 1112—X1112, O.H.
S.A.E. 1020, X1020, 1120, 1040, 1045

Identification Colors: S.A.E. 1112—White; S.A.E. X1112—Orange; S.A.E. 1120—Black; S.A.E. 1020, X1020—Green; S.A.E. 1040, 1045—Yellow.

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet: S.A.E. 1112	S.A.E. 1020 X1020	S.A.E. 1120	S.A.E. X1112	S.A.E. *1040 *1045
3/32	.029	6.00	10-12	.....	.....	10-12	.....
1/8	.053	5.00	10-12	....	....	10-12	..
5/32	.083	5.00	10-12	....	....	10-12	..
3/16	.120	4.00	10-12	10-12	....	10-12	..
7/32	.163	4.00	10-12	....	....	10-12	..
1/4	.213	2.50	10-12	10-12	.....	10-12	.....
9/32	.269	2.50	10-12	....	....	10-12	..
5/16	.332	2.50	10-12,20†	10-12	....	10-12	..
11/32	.348	2.50	10-12	....	....	....	..
3/8	.478	1.75	10-12,20†	10-12	....	10-12	..
7/16	.651	1.75	10-12	Chgo. 12	.....	10-12	.....
1/2	.850	1.30	10-12,20	10-12	....	10-12	12
9/16	1.08	1.30	10-12	N.Y. 12	....	10-12	..
5/8	1.38	1.30	10-12,20†	10-12	....	10-12	12
11/16	1.61	1.05	10-12	N.Y. 12	....	....	..
3/4	1.91	1.05	10-12,20	.10-12	.....	.....	12

(Continued)

* Shipped from our New York Plant.

† These 20 ft. lengths shipped from our New York Plant.

Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tubr Babbi 203
Rod 21
Bol Rei 22
Data 243

COLD FINISHED SQUARES

Moltrup Quality

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet S.A.E. 1112	S.A.E. 1020 X1020	S.A.E. 1120	Bessemer S.A.E. X1112	S.A.E. *1040 *1045
(Continued)							
13/16	2.24	1.05	10-12	Chgo. 12			
7/8	2.60	1.05	10-12,20	10-12	....	....	12
15/16	2.99	1.05	10-12,20	Chgo. 12	....	....	..
1	3.40	1.05	10-12,20	10-12	....	....	12
1-1/16	3.83	1.05	10-12,20	Chgo. 12	....	....	Chgo. 12
1-1/8	4.30	1.05	10-12,20	10-12			12
1-3/16	4.80	1.05	10-12	....	....	....	..
1-1/4	5.31	1.05	10-12,20	10-12,20†	N.Y.	....	12
1-5/16	5.86	1.05	....	10-12	....	....	..
1-3/8	6.43	1.25	....	10-12	10-12	....	..
1-7/16	7.03	1.25		10-12			
1-1/2	7.65	1.25	....	10-12,20†	10-12	....	12
1-9/16	8.30	1.25	....	10-12	....	....	..
1-5/8	8.98	1.25	....	10-12	10-12	....	..
1-11/16	9.68	1.25	....	10-12	....	....	..
1-3/4	10.41	1.25		10-12,20†	10-12		
1-13/16	11.17	1.25	....	10-12	....	....	..
1-7/8	11.95	1.25	....	10-12,20†	....	....	..
1-15/16	12.76	1.25	....	10-12	....	....	..
2	13.60	1.25	....	10-12,20†	10-12	....	12
2-1/16	14.46	2.00		10-12			
2-1/8	15.35	2.00	....	10-12	....	....	..
2-3/16	16.27	2.00	....	10-12	....	....	..
2-1/4	17.21	2.00	....	10-12,20†	10-12	....	..
2-5/16	18.18	2.00		10-12			
2-3/8	19.19	2.00	....	10-12	....	....	..
2-7/16	20.21	2.00	....	10-12	....	....	..
2-1/2	21.25	2.00	....	10-12,20†	10-12	....	..
2-9/16	22.33	2.00	....	10-12	....	....	..
2-5/8	23.43	2.00		10-12			
2-3/4	25.71	2.00	....	10-12	....	....	..
2-7/8	28.10	2.00	....	10-12	....	....	..
3	30.60	2.00	....	10-12,20†	10-12	....	..
3-1/8	33.20	2.00		10-12			
3-1/4	35.94	2.00	....	10-12	10-12	....	..
3-1/2	41.65	2.00	....	10-12	10-12	....	..
3-3/4	47.80	2.00	....	10-12	....	....	..
4	54.40	2.00	....	10-12	10-12	....	..
4-1/2	69.81	4.00		10-12			

† These 20′ lengths shipped from our New York plant.

* Shipped from our New York Plant.

Concentrate Purchases with Ryerson and Save Time, Trouble and Money

Shorten the work of buying your steel and allied products. Make one contact, one order, one checking, one invoice cover current requirements on the various lines. You'll find it saves time and trouble as well as money.

COLD FINISHED FLATS

Open Hearth and S.A.E. X1020

Moltrup Quality

Identification Color: S.A.E. 1020, X1020—Green.

Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
3/32			
1/4	.080	10.50	12
3/8	.120	8.50	12
1/2	.159	8.50	12
5/8	.199	7.50	12
3/4	.239	6.50	12
7/8	.279	6.50	12
1	.319	6.50	12
1 1/4	.398	5.50	12
1 1/2	.478	5.50	12
1 3/4	.558	5.00	12
2	.638	5.00	12
1/8			
1/16	.080	8.50	12
1/4	.106	8.50	12
5/16	.133	6.50	12
3/8	.159	6.50	12
7/16	.186	6.50	12
1/2	.213	6.50	12,20*
9/16	.239	5.50	12
5/8	.266	5.50	12
11/16	.293	5.50	Chgo.
3/4	.319	4.50	12,20*
7/8	.372	4.50	12
1	.425	4.50	12,20*
1 1/8	.478	3.50	12,20*
1 1/4	.531	3.50	12,20*
1 3/8	.584	3.50	12
1 1/2	.638	3.50	12,20*
1 5/8	.691	3.00	12
1 3/4	.744	3.00	12,20*
1 7/8	.797	3.00	12
2	.850	3.00	12,20*
2 1/8	.903	3.00	N.Y. 12
2 1/4	.956	3.00	12,20*
2 3/8	1.009	3.00	12
2 1/2	1.063	3.00	12
2 3/4	1.169	3.00	12
3	1.275	3.00	12,20*
3 1/8	1.328	3.50	N.Y. 12
3 1/4	1.384	3.50	12
3 1/2	1.488	3.50	12
4	1.700	3.50	12,20*
4 1/2	1.913	3.50	12
5	2.125	3.50	12
5 1/2	2.338	3.50	12
6	2.550	3.50	12
5/32			
1/4	.133	8.50	12
3/8	.199	6.50	12
1/2	.266	6.50	12
5/8	.332	5.50	12

Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.
5/32			
3/4	.398	4.50	12
7/8	.465	4.50	12
1	.531	4.50	12
1 1/4	.664	3.50	12
1 1/2	.797	3.50	12
1 3/4	.930	3.00	12
2	1.063	3.00	12
3/16			
1/4	.160	7.75	12
5/16	.199	5.75	12
3/8	.239	5.75	12
7/16	.279	5.75	12
1/2	.319	5.75	12,20*
9/16	.359	5.25	12
5/8	.398	5.25	12,20*
3/4	.478	3.75	12,20*
7/8	.558	3.75	12
1	.638	3.75	12,20*
1 1/8	.717	2.75	12
1 1/4	.797	2.75	12,20*
1 3/8	.877	2.75	12
1 1/2	.956	2.75	12,20*
1 5/8	1.036	1.75	N.Y.
1 3/4	1.116	1.75	12
1 7/8	1.195	1.75	12
2	1.275	1.75	12,20*
2 1/4	1.434	1.75	12
2 1/2	1.594	1.75	12
2 3/4	1.753	1.75	12
3	1.913	1.75	12,20*
3 1/4	2.072	3.00	12
3 1/2	2.231	3.00	12
3 3/4	2.391	3.00	N.Y. 12
4	2.550	3.00	12,20*
4 1/2	2.866	3.00	N.Y. 12
5	3.188	3.00	12
5 1/2	3.407	3.00	12
6	3.825	3.00	12
30	19.120	Spec.	8
36	22.950	"	8,10
40	25.500	"	10
48	30.600	"	8,10
7/32			
1/4	.177	7.75	Buff.
1/4			
5/16	.266	5.75	12
3/8	.319	5.75	12
7/16	.372	5.75	12
1/2	.425	5.75	12,20*
9/16	.478	5.25	12

(Continued)

* These 20' lengths shipped from our New York plant.

Cutting extras in back of book.

Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tubr Babbi 203
Rod
Bol Rei
Data 243

COLD FINISHED FLATS

Open Hearth and S.A.E. X1020

Moltrup Quality

Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
(Continued)			
1/4			
5/8	.531	5.25	12,20*
11/16	.584	5.25	12
3/4	.638	3.75	12,20
13/16	.691	3.75	12
7/8	.744	3.75	12,20*
15/16	.797	3.75	12
1	.850	3.75	12,20
1 1/8	.956	2.75	12
1 1/4	1.063	2.75	12,20*
1 3/8	1.169	2.75	12
1 1/2	1.275	2.75	12,20
1 5/8	1.381	1.75	12
1 3/4	1.488	1.75	12,20*
1 7/8	1.594	1.75	12
2	1.700	1.75	12,20
2 1/4	1.913	1.75	12,20*
2 1/2	2.125	1.75	12,20*
2 3/4	2.388	1.75	12,20*
3	2.550	1.75	12,20
3 1/4	2.763	3.00	12
3 1/2	2.975	3.00	12
3 3/4	3.188	3.00	12
4	3.400	3.00	12,20*
4 1/4	3.613	3.00	12
4 1/2	3.825	3.00	12
5	4.250	3.00	12,20*
5 1/2	4.675	3.00	12
6	5.100	3.00	12,20*
8	6.800	Spec.	10-14
10	8.500	"	10-14
12	10.200	"	10-14
24	20.400	"	8
30	25.500	"	8,10
36	30.600	"	8,10
48	40.800	"	10
5/16			
3/8	.398	5.75	12
7/16	.465	5.75	12
1/2	.531	5.75	12
9/16	.598	5.25	12
5/8	.664	5.25	12,20*
11/16	.731	5.25	12
3/4	.797	3.75	12,20*
13/16	.863	3.75	12
7/8	.930	3.75	12
15/16	.996	3.75	12
1	1.063	3.75	12,20*
1 1/8	1.195	2.75	12
1 1/4	1.328	2.75	12,20*
1 3/8	1.461	2.75	12
1 1/2	1.594	2.75	12,20*
1 5/8	1.727	1.75	N.Y. 12

Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
5/16			
1 3/4	1.859	1.75	12,20*
2	2.125	1.75	12,20*
2 1/4	2.391	1.75	12
2 1/2	2.656	1.75	12,20*
2 3/4	2.922	1.75	12
3	3.188	1.75	12
3 1/4	3.453	3.00	12
3 1/2	3.719	3.00	12
4	4.250	3.00	12
4 1/2	4.782	3.00	12
5	5.313	3.00	12
6	6.375	3.00	12
8	8.500	Spec.	10-12
10	10.626	"	N.Y.
12	12.750	"	Det.
20	21.250	"	8
36	38.250	"	12
3/8			
7/16	.558	4.75	12
1/2	.638	4.75	12
9/16	.717	4.25	12
5/8	.797	4.25	12
11/16	.877	4.25	N.Y. 12
3/4	.956	2.75	12,20*
7/8	1.116	2.75	12,20*
1	1.275	2.75	12,20*
1 1/8	1.434	2.75	12
1 1/4	1.594	2.75	12,20*
1 3/8	1.753	2.75	12
1 1/2	1.913	2.75	12,20
1 5/8	2.072	1.75	12
1 3/4	2.231	1.75	12,20
1 7/8	2.391	1.75	N.Y. 12
2	2.550	1.75	12,20*
2 1/4	2.869	1.75	12,20*
2 1/2	3.188	1.75	12,20*
2 3/4	3.506	1.75	12
3	3.825	1.75	12,20*
3 1/4	4.144	2.50	12
3 1/2	4.463	2.50	12,20*
3 3/4	4.781	2.50	12
4	5.100	2.50	12,20
4 1/4	5.419	2.50	12
4 1/2	5.738	2.50	12
5	6.375	2.50	12
5 1/2	7.013	2.50	12
6	7.650	2.50	12,20*
8	10.200	Spec.	10-14
10	12.750	"	10-14
12	15.300	"	10-14
20	25.500	"	8
36	45.900	"	12

(Continued)

* These 20' lengths shipped from our New York plant.

Cutting extras in back of book.

COLD FINISHED FLATS

Open Hearth and S.A.E. X1020

Moltrup Quality

Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
(Continued)			
7/16			
1/2	.744	4.75	12
9/16	.837	4.25	12
5/8	.930	4.25	12
11/16	1.023	4.25	12
3/4	1.116	2.75	12
7/8	1.302	2.75	12
1	1.488	2.75	12,20*
1 1/8	1.673	2.75	12
1 1/4	1.859	2.75	12
1 3/8	2.046	2.75	N.Y. 12
1 1/2	2.231	2.75	12
1 5/8	2.417	1.75	12
1 3/4	2.603	1.75	12
2	2.975	1.75	12
2 1/4	3.347	1.75	12
2 1/2	3.719	1.75	12
3	4.463	1.75	20
3 1/4	4.830	2.50	Buff.
3 1/2	5.206	2.50	12
4	5.950	2.50	12
4 1/2	6.694	2.50	12
5	7.438	2.50	12
6	8.925	2.50	12
1/2			
9/16	.956	3.25	12
5/8	1.063	3.25	12,20*
11/16	1.169	3.25	12
3/4	1.275	1.75	12,20*
13/16	1.382	1.75	N.Y. 12
7/8	1.488	1.75	12,20*
1	1.700	1.75	12,20
1 1/8	1.913	1.75	12
1 1/4	2.125	1.75	12,20
1 3/8	2.338	1.75	12,20*
1 1/2	2.550	1.75	12,20*
1 5/8	2.763	1.50	12
1 3/4	2.975	1.50	12,20*
2	3.400	1.50	12,20
2 1/4	3.825	1.50	12,20*
2 1/2	4.250	1.50	12,20
2 3/4	4.675	1.50	12
3	5.100	1.50	12,20
3 1/4	5.525	2.50	12
3 1/2	5.950	2.50	12,20*
3 3/4	6.375	2.50	12
4	6.800	2.50	12,20
4 1/4	7.225	2.50	12
4 1/2	7.650	2.50	12,20*
4 3/4	8.075	2.50	12
5	8.500	2.50	12,20*
5 1/4	8.925	2.50	12
5 1/2	9.350	2.50	12

Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
1/2			
5 3/4	9.775	2.50	12
6	10.200	2.50	12,20*
8	13.600	Spec.	10-14
10	17.000	"	10-14
12	20.400	"	10-14
36	61.200	"	12
9/16			
5/8	1.195	3.25	12
3/4	1.434	1.75	12
7/8	1.673	1.75	12
1	1.913	1.75	12
1 1/8	2.152	1.75	12
1 1/4	2.391	1.75	12
1 1/2	2.869	1.75	12
1 3/4	3.347	1.50	12
2	3.825	1.50	12
2 1/2	4.781	1.50	12
3	5.738	1.50	12
5/8			
11/16	1.461	2.75	12
3/4	1.594	1.50	12,20*
13/16	1.727	1.50	12
7/8	1.859	1.50	12,20*
15/16	1.992	1.50	12
1	2.125	1.50	12,20*
1 1/16	2.258	1.50	12
1 1/8	2.391	1.50	12
1 1/4	2.656	1.50	12,20
1 3/8	2.922	1.50	12
1 1/2	3.188	1.50	12,20*
1 5/8	3.453	1.50	12
1 3/4	3.719	1.50	12,20*
2	4.250	1.50	12,20*
2 1/4	4.781	1.50	12,20*
2 1/2	5.313	1.50	12,20*
2 3/4	5.844	1.50	12
3	6.375	1.50	12,20*
3 1/4	6.906	2.50	12
3 1/2	7.438	2.50	12
3 3/4	7.969	2.50	12
4	8.500	2.50	12,20
4 1/4	9.031	2.50	12
4 1/2	9.563	2.50	12
4 3/4	10.090	2.50	12
5	10.625	2.50	12
5 1/2	11.688	2.50	12
6	12.750	2.50	12
7	14.875	Spec.	N.Y.
8	17.000	"	10-14
10	21.250	"	10-14
12	25.500	"	10-14

(Continued)

* These 20' lengths shipped from our New York plant.

Cutting extras in back of book.

Alloys 89
Heat Treat Alloys 117
Tool Steel 123
Sheets
Spec Sheet 157
Stainles 167
Tubin 189
Blr. Tubr Babbi 203
Rod 21
Bol Rei 2
Data 243

COLD FINISHED FLATS

Open Hearth and S.A.E. X1020
Moltrup Quality

Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
(Continued)			
11/16			
3/4	1.753	1.50	12
7/8	2.045	1.50	12
1	2.337	1.50	12
1 1/8	2.630	1.50	12
1 1/4	2.922	1.50	12
1 1/2	3.506	1.50	12
2	4.675	1.50	12
3/4			
13/16	2.072	1.50	12
7/8	2.231	1.50	12
1	2.550	1.50	12,20*
1 1/8	2.869	1.50	12
1 1/4	3.188	1.50	12,20*
1 3/8	3.506	1.50	12
1 1/2	3.825	1.50	12,20*
1 5/8	4.144	1.50	12
1 3/4	4.463	1.50	12,20
2	5.100	1.50	12,20*
2 1/4	5.738	1.50	12,20*
2 3/8	6.057	1.50	N.Y. 12
2 1/2	6.375	1.50	12,20*
2 3/4	7.013	1.50	12
3	7.650	1.50	12,20
3 1/4	8.288	2.50	12
3 1/2	8.925	2.50	12,20*
4	10.200	2.50	12,20
4 1/2	11.475	2.50	12,20*
5	12.750	2.50	12,20*
5 1/2	14.025	2.50	12
6	15.300	2.50	12,20*
8	20.400	Spec.	10-14
10	25.500	"	10-14
12	30.600	"	10-14
7/8			
15/16	2.789	1.50	12
1	2.975	1.50	12,20*
1 1/8	3.347	1.50	12
1 1/4	3.719	1.50	12,20
1 3/8	4.091	1.50	12
1 1/2	4.463	1.50	12,20
1 3/4	5.206	1.50	12
2	5.950	1.50	12,20
2 1/4	6.690	1.50	12
2 1/2	7.438	1.50	12
2 3/4	8.180	1.50	12
3	8.925	1.50	12,20*
3 1/2	10.413	2.50	12,20*
4	11.900	2.50	12,20*
4 1/2	13.388	2.50	12
5	14.875	2.50	12
6	17.850	2.50	12
8	23.800	Spec.	10-14

Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
7/8			
10	29.750	Spec.	10-14
12	35.700	"	10-14
1			
1 1/8	3.825	1.50	12
1 1/4	4.250	1.50	12,20*
1 3/8	4.675	1.50	12
1 1/2	5.100	1.50	12,20*
1 5/8	5.525	1.50	12,20*
1 3/4	5.950	1.50	12,20*
2	6.800	1.50	12,20
2 1/4	7.650	1.50	12
2 1/2	8.500	1.50	12,20
2 3/4	9.350	1.50	12
3	10.200	1.50	12,20
3 1/4	11.050	2.50	12
3 1/2	11.900	2.50	12
4	13.600	2.50	12,20*
4 1/2	15.300	2.50	12
5	17.000	2.50	12
5 1/2	18.700	2.50	12
6	20.400	2.50	12
7	23.800	6.00	N.Y.
8	27.200	Spec.	10-14
10	34.000	"	10-14
12	40.800	"	10-14
1-1/8			
1 1/4	4.781	1.50	12
1 3/8	5.260	1.50	12
1 1/2	5.738	1.50	12,20
1 5/8	6.216	1.50	N.Y. 12
1 3/4	6.694	1.50	12
2	7.650	1.50	12
2 1/4	8.606	1.50	12
2 1/2	9.562	1.50	12
2 3/4	10.519	1.50	N.Y. 12
3	11.476	1.50	12
4	15.300	2.50	Chgo.
1-1/4			
1 3/8	5.840	1.50	12
1 1/2	6.375	1.50	12,20*
1 5/8	6.906	1.50	12
1 3/4	7.438	1.50	12
1 7/8	7.969	1.50	Chgo.
2	8.500	1.50	12,20
2 1/4	9.563	1.50	12,20*
2 1/2	10.625	1.50	12,20*
2 3/4	11.688	1.50	12
3	12.750	1.50	12,20*
3 1/4	13.810	2.50	N.Y. 12
3 1/2	14.875	2.50	12,20*
4	17.000	2.50	12,20*
4 1/4	18.060	2.50	12

(Continued)

* These 20' lengths shipped from our New York plant.
Cutting extras in back of book.

COLD FINISHED FLATS

Open Hearth and S.A.E. X1020
Moltrup Quality

Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
(Continued)			
1-1/4			
4½	19.125	2.50	12
5	21.250	2.50	12
5½	23.370	2.50	Chgo.
6	25.500	2.50	12
8	34.000	Spec.	10-14
10	42.500	"	10-14
12	51.000	"	10-14
1-5/16			
2	8.925	1.50	12
1-3/8			
2	9.350	1.50	N.Y.
3	14.020	1.50	"
1-1/2			
1⅝	8.288	1.50	N.Y.
1¾	8.925	1.50	12,20
2	10.200	1.50	12,20
2¼	11.475	1.50	12
2½	12.750	1.50	12,20
2¾	14.025	1.50	12
3	15.300	1.50	12,20
3¼	16.570	2.50	12
3½	17.850	2.50	12
4	20.400	2.50	12,20*
4½	22.950	2.50	12
5	25.500	2.50	12
5½	28.050	2.50	N.Y. 12
6	30.600	2.50	12
8	40.800	Spec.	10-14
10	51.000	"	10-14
12	61.200	"	10-14
1-3/4			
2	11.900	1.50	12
2¼	13.390	1.50	12
2½	14.875	1.50	12
2¾	16.363	1.50	12
3	17.850	1.50	12
3½	20.825	2.50	12
4	23.800	2.50	12
4½	26.770	2.50	12
1-3/4			
5	29.750	2.50	12
6	35.700	2.50	12
2			
2¼	15.300	1.50	12
2½	17.000	1.50	12
2¾	18.700	1.50	12
3	20.400	1.50	12
3¼	22.100	2.50	12
3½	23.800	2.50	12,20
4	27.200	2.50	12,20*
4½	30.600	2.50	12
5	34.000	2.50	12
6	40.800	2.50	12
8	54.400	Spec.	10-14
10	68.000	"	10-14
12	81.600	"	10-14
2-1/4			
2½	19.130	1.50	12
2¾	21.030	1.50	12
3	22.960	1.50	12
3¼	24.860	2.50	N.Y.
3½	26.770	2.50	12
4	30.600	2.50	12
4½	34.425	2.50	N.Y.
5	38.250	2.50	12
6	45.900	2.50	12
2-1/2			
2¾	23.380	1.50	12
3	25.500	1.50	12
3¼	27.620	2.50	12
3½	29.750	2.50	12
4	34.000	2.50	12
4½	38.250	2.50	N.Y.
5	42.500	2.50	12
6	51.000	2.50	12
3			
4	40.800	2.50	12
5	51.000	2.50	Clev.
6	61.200	2.50	N.Y. 12

* These 20' lengths shipped from our New York plant.
Cutting extras in back of book.

RYERSON STEEL-SERVICE

The first source for the buyer in doubt; the regular source for the buyer who knows.

Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tubr Babbi 203
Rod 21
Bol Rei 22
Data 243

EXTRA WIDE COLD FINISHED FLATS
COLD ROLLED O. H. STEEL PLATES

Cold drawn finish. Can be cut to any size, or burned to special shapes without excessive warpage or discoloration.

Size in Inches	Wt. Per Ft. Lbs.	Stock Lgths. Ft.
3/16		
36	22.95	8,10
40	25.50	10
48	30.60	8,10
1/4		
8	6.80	10-14
10	8.50	10-14
12	10.20	10-14
30	25.50	8,10
36	30.60	8,10
48	40.80	10
5/16		
8	8.500	10-12
10	10.626	Det.
12	12.750	"
20	21.250	8
3/8		
8	10.20	10-14
3/8		
10	12.75	10-14
12	15.30	10-14
20	25.50	8
1/2		
8	13.60	10-14
10	17.00	10-14
12	20.40	10-14
5/8		
7	14.86	N.Y.
8	17.00	10-14
10	21.25	10-14
12	25.55	10-14
3/4		
8	20.40	10-14
10	25.50	10-14
12	30.60	10-14
7/8		
8	23.800	10-14
10	29.750	10-14
7/8		
12	35.700	10-14
1		
7	23.80	N.Y.
8	27.20	10-14
10	34.00	10-14
12	40.80	10-14
1-1/4		
8	34.00	10-14
10	42.50	10-14
12	51.00	10-14
1-1/2		
8	40.80	10-14
10	51.00	10-14
12	61.20	10-14
2		
8	54.40	10-14
10	68.00	10-14
12	81.00	10-14

GROUND AND POLISHED STRIPPER PLATE

Moltrup Quality

Shipped from our New York and Buffalo Plants

Machined from select hot rolled material. Inert strains generally developed by rolling or drawing operations are thus avoided, eliminating the danger of warpage. Both sides ground and polished, and cut to width on planer, assuring accurate parallel edges and flat surfaces. Thickness tolerance .003" plus or minus. Applications include: jigs, rubber moulds, printing equipment, ejector plates, cams and machine tables.

Size in Inches	In Stock At	Est. Wt. Per Plate, Lbs.	Stock Lgths. Ft.
1/4x 8	N.Y.	41	6
10	Buff.	51	6
12	N.Y.	61	6
5/16x 8	N.Y.	51	6
10	Buff.	64	6
12	N.Y.	76	6
3/8x 8	N.Y.	61	6
10	N.Y.	76	6
12	N.Y.	91	6
1/2x 8	N.Y.	82	6
10	N.Y.	102	6
1/2x12	N.Y.	122	6
5/8x 8	N.Y.	102	6
10	N.Y.	128	6
12	N.Y.	153	6
3/4x 8	N.Y.	122	6
10	N.Y.	153	6
12	N.Y.	184	6
1 x 8	N.Y.	163	6
10	N.Y.	204	6
12	N.Y.	245	6

2300's Pg. 90
3100's Pg. 94
4100's Pg. 100
4300's Pg. 109
4600's Pg. 111
4800's Pg. 112
6100's Pg. 113
52100's Pg. 114
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Alloys 89
Heat Treat. Alloys 117
Tool Steel 123
Sheets 13
Spec. Sheet 157
Stainles 167
Tubing 189
Blr. Tub Babbi 203
Rod 21
Bol Rei 22
Data 243

THE RYERSON CERTIFIED ALLOY STEEL PLAN

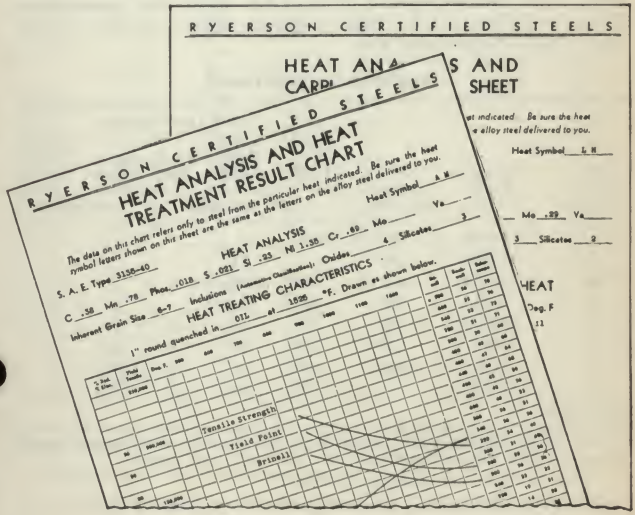
Ryerson's far-reaching quality control plan on alloy steel reduces failures, eliminates spoilage, and assures uniform heat treatment response—yet Ryerson Certified Alloys cost no more.

These uniform high quality alloys are from selected heats of steels that meet an ideal specification — "a specification within a specification" — that assures uniform response to heat treatment. Every bar from each heat is clearly stamped with heat identification letters, and bars from each heat are tested for heat treatment response.

Data sheets showing the chemical and physical analysis, grain size, cleanliness rating and hardening characteristics are then prepared. This data is sent with every shipment of Ryerson Certified Alloy Steel, giving the heat treater an accurate guide to aid him in securing the best results in less time. He does not have to test. He takes no chances. Spoilage and retreating are eliminated, and a sound, dependable job results.

Ryerson Alloy Data Sheets

While two heats of an alloy steel may be almost identical in chemical analysis, one may be much more responsive to heat treatment. For this reason, Ryerson data sheets show actual heat treatment results. Two types of data sheets are used, one for the carburizing steels which gives complete analysis and the results of carburizing tests. The other, which is for the higher carbon steels, shows actual quenching and drawing results. Both charts are accurate guides of very definite value to the heat treater. When the Ryerson Certified Alloy Steel charts are received be sure to pass them along to your Heat Treating Department.



RYERSON ALLOY STEELS

For your convenience in locating the various alloys, they appear on the following pages in this sequence:

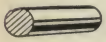
Hot Rolled, Cold Finished, Natural and Heat Treated Alloys

S.A.E. 2300 Series Hot Rolled & Cold Finished.
S.A.E. 3100 Series Hot Rolled & Cold Finished & Heat Treated.
S.A.E. 3250 Hot Rolled.
S.A.E. X4130 Hot Rolled & Cold Finished & Heat Treated.
S.A.E. 4140 Hot Rolled & Cold Finished, Heat Treated.
S.A.E. 4150 Hot Rolled.
S.A.E. X4340 Hot Rolled.
H.T.M. Hot Rolled.
S.A.E. 4615-4620 Hot Rolled & Cold Finished.
S.A.E. 4640 Hot Rolled.
S.A.E. 4815 Hot Rolled.
S.A.E. 9255 Hot Rolled.
S.A.E. 6145 Hot Rolled.
S.A.E. 52100 Hot Rolled.
Rytense A.A. Hot Rolled.
Rycase Hot Rolled.

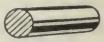
Special Heat Treated Alloys

Rycrome (Chrome Molybdenum) Hot Rolled & Cold Finished.
Nikrome (Chrome Nickel) Hot Rolled.
Nikrome "M" (Chrome Nickel Molybdenum) Hot Rolled.
Ryco (Carbon Manganese) Hot Rolled & Cold Finished.
Ry-Arm (Carbon Manganese) Hot Rolled.
Ry-Ax (Carbon Manganese) Hot Rolled.

3½% NICKEL STEELS



HOT ROLLED ROUNDS



S.A.E. 2315—2320—2330—2335—2340—Not Annealed
S.A.E. 2340—2345—2350—Annealed

A.S.T.M. fine (5-8) grain size

Identification Colors: S.A.E. 2315, 2320—Black and Green; S.A.E. 2330, 2335—Aluminum and Blue; S.A.E. 2340, Not Annealed—Green and Pink; S.A.E. 2340, Annealed—Black and Blue; S.A.E. 2345, 2350—Yellow and Blue.

Machine Straightened

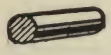
Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet				
			S.A.E. 2315 2320	S.A.E. 2330 2335	S.A.E. 2340	S.A.E. *2340	S.A.E. 2345 2350
			Not Annealed			Annealed	
¼	0.167	1.00	Chgo.				
5/16	0.261	.70	..	16	..	..	..
⅜	0.376	.40	16	Chgo.	..	..	..
7/16	0.511	.30	16	Chgo.	..	..	..
½	0.668	.20	16	16	16		
5/8	1.04	.10	16	16	16	16	..
¾	1.50	Base	16	16	16	16	..
⅞	2.04	"	16	16	16	16	

(Continued)

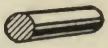
This stock includes bars 14 to 16 ft. which will be furnished occasionally unless you indicate that all 16 ft. bars are desired.

* Shipped from our Cleveland plant.

For cutting extras and S.A.E. specifications, see back of book.



3½% NICKEL STEELS



HOT ROLLED ROUNDS—(Cont'd)

S.A.E. 2315—2320—2330—2335—2340—Not Annealed

S.A.E. 2340—2345—2350—Annealed

A.S.T.M. fine (5-8) grain size

Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet				
			S.A.E. 2315 2320	S.A.E. 2330 2335	S.A.E. 2340	S.A.E. *2340	S.A.E. 2345 2350
			Not Annealed			Annealed	
(Continued)							
1	2.67	Base	16	16	16	16	
1-1/16	3.01	"	16	..	..	..	..
1-1/8	3.38	"	16	16	16	16	..
1-1/4	4.17	"	16	16	16	16	..
1-5/16	4.60	"	Chgo.	..	..	16	..
1-3/8	5.05	"	16	16	16	16	
1-1/2	6.01	"	16	16	16	16	..
1-5/8	7.05	.10	16	16	16	16	..
1-3/4	8.18	.10	16	16	16	16	..
1-7/8	9.39	.10	16	16	16	16	..
2	10.68	.10	16	16	16	16	
2-1/8	12.06	.15	16	16	16	16	..
2-1/4	13.52	.15	16	16	16	16	..
2-3/8	15.06	.15	16	16	16	16	..
2-1/2	16.69	.15	16	16	16	16	..
2-5/8	18.40	.20	16	16	16	16	
2-3/4	20.20	.20	16	16	16	16	..
2-7/8	22.07	.20	16	Chgo.	16	16	..
3	24.03	.20	16	16	16	16	..
3-1/8	26.08	.25	16	16	..	..	Chgo.
3-1/4	28.21	.25	16	16			16
3-3/8	30.42	.25	16	..	..	..	..
3-1/2	32.71	.25	16	16	..	..	16
3-5/8	35.10	.25	16	..	..	..	..
3-3/4	37.55	.25	16	16	..	..	16
3-7/8	40.09	.25	16				
4	42.73	.25	16	16	..	..	16
4-1/4	48.23	.25	16	16	..	..	16
4-1/2	54.08	.25	16	16	..	..	16
4-3/4	60.25	.35	16	16	..	..	16
5	66.76	.35	16	16			16
5-1/4	73.60	.45	16	Clev.	..	..	Chgo.
5-1/2	80.78	.45	16	Clev.	..	..	16
5-3/4	88.29	.55	16	Clev.	..	..	Chgo.
6	96.13	.55	16	16	..	..	16
6-1/4	104.31	.65	Det.	16			
6-1/2	112.82	.65	16	..	..	..	..
6-3/4	121.78	.75	16	..	..	..	..
7	130.85	.75	16	16	..	..	..
7-1/2	150.21	.75	Chgo.	..	..	..	..
8	170.90	1.10	16				

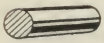
This stock includes bars 14 to 16 ft. which will be furnished occasionally unless you indicate that all 16 ft. bars are desired.

* Shipped from our Cleveland plant.

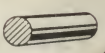
For cutting extras and S.A.E. specifications, see back of book.

Heat Treat. Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Bbbit 203
Rod
Data 243

3½% NICKEL STEELS



COLD FINISHED ROUNDS
S.A.E. 2315—2320—2330
NOT ANNEALED



A.S.T.M. fine (5-8) grain size

Identification Colors: S.A.E. 2315, 2320—Black and Green; S.A.E. 2330—Aluminum and Blue

All sizes $2\frac{15}{16}$" and larger are Turned and Polished

Size in Inches	Weight Per Ft. Lbs.	Net Extra For Size	Stock Lengths, Feet S.A.E. 2315 2320	S.A.E. 2330
1/4	.167	1.25	12	*12
5/16	.261	1.00	12	*12
3/8	.376	.90	12	*12
7/16	.511	.70	12	*12
1/2	.668	.70	12	*12
9/16	.845	.70	12	*12
5/8	1.04	.55	12	*12
11/16	1.26	.45	12	*12
3/4	1.50	.45	12	*12
13/16	1.76	.40	12	*12
7/8	2.04	.40	12	*12
15/16	2.34	.40	12	*12
1	2.67	.40	12	*12
1-1/16	3.01	.40	12	*12
1-1/8	3.38	.40	12	*12
1-3/16	3.77	.40	12	*12
1-1/4	4.17	.40	12	*12
1-5/16	4.60	.40	Chgo. 12	*12
1-3/8	5.05	.40	12	12
1-7/16	5.52	.40	12	12
1-1/2	6.01	.40	12	12
1-9/16	6.52	.45	12	Chgo. 12
1-5/8	7.05	.45	12	12
1-11/16	7.60	.45	Chgo. 12	12
1-3/4	8.18	.45	12	12
1-13/16	8.77	.45	Chgo. 12	Clev. 12
1-7/8	9.39	.45	12	Chgo. 12
1-15/16	10.02	.45	12	12
2	10.68	.45	12	12
2-1/16	11.36	.45	..	Chgo. 12
2-1/8	12.06	.45	Det. 12	Chgo. 12
2-3/16	12.78	.45	Det. 12	Chgo. 12
2-1/4	13.52	.45	12	Chgo. 12
2-5/16	14.28	.45	..	Chgo. 12
2-3/8	15.06	.45	Chgo. 12	Chgo. 12
2-7/16	15.87	.45		Chgo. 12
2-1/2	16.69	.45	12	Chgo. 12
2-5/8	18.40	.50	12	12
2-3/4	20.19	.50	12	Chgo. 12
2-7/8	22.07	.50	Det. 12	Chgo. 12
2-15/16	23.06	.70	12	12
3	24.03	.70	12	Chgo. 12

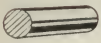
(Continued)

Some random lengths occasionally furnished unless exact lengths are specified.

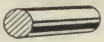
* These sizes also carried annealed.

For cutting extras, see back of book.

3½% NICKEL STEELS



COLD FINISHED ROUNDS—(Cont'd)
S.A.E. 2315—2320—2330
NOT ANNEALED



Size in Inches	Weight Per Ft. Lbs.	Net Extra For Size	Stock Lengths, Feet S.A.E. 2315 2320	S.A.E. 2330
(Continued)				
3-1/4	28.20	.75	12	..
3-1/2	32.71	.85	12	..
3-3/4	37.55	.90	Chgo. 12	..
4	42.73	1.00	Chgo. 12	Bost. 12
4-1/4	48.23	1.10	Clev. 12	..
4-1/2	54.08	1.20	Chgo. 12	..
4-3/4	60.25	1.20	Clev. 12	..
5	66.76	1.30	Chgo. 12	..
5-1/2	80.78	1.75	Det. 12	..
6	96.13	2.25	Det. 12	..

Some random lengths occasionally furnished unless exact lengths are specified.

3½% NICKEL STEELS

COLD FINISHED HEXAGONS
S.A.E. 2315—2320—2330
NOT ANNEALED

A.S.T.M. fine (5-8) grain size

Identification Colors: S.A.E. 2315, 2320—Black and Green; S.A.E. 2330—Aluminum and Blue

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet S.A.E. *2315 *2320	S.A.E. 2330
3/8	.414	1.75	..	Chgo. 12
7/16	.564	1.25	..	†12
1/2	.736	.90	..	†12
9/16	.932	.80	..	†12
5/8	1.15	.70	..	†12
11/16	1.39	.60	..	†12
3/4	1.66	.60	12	†12
13/16	1.94	.60	..	†12
7/8	2.25	.55	12	†12
15/16	2.59	.55	..	†12
1	2.94	.50	12	†12
1-1/16	3.32	.50	..	†12
1-1/8	3.73	.45	12	†12
1-1/4	4.60	.45	12	†12
1-5/16	5.07	.50	..	†12
1-3/8	5.57	.50	..	12
1-7/16	6.09	.50	..	12
1-1/2	6.62	.60	12	12
1-5/8	7.78	.60	..	Chgo. 12
1-3/4	9.02	.60	..	Chgo. 12
1-7/8	10.35	.60	..	Chgo. 12
2	11.77	.75	..	Chgo. 12

* Shipped from our Chicago Plant.
† These sizes also carried annealed.
For S.A.E. specifications and cutting extras, see back of book.

3½% NICKEL STEEL PLATES

HOT ROLLED AND ANNEALED

For sizes in stock, see Plate section

Heat Treat. Alloys 117
Tool Steel 123
Sheets 13[illegible]
Spec. Sheets 157
Stainless 167
Tubing 189
Bir. Tubr Babbi 203
[illegible]din Rod 21[illegible]
Bol[illegible] Rei 22
Data 243
C[illegible]

CHROME NICKEL STEELS

HOT ROLLED ROUNDS

S.A.E. 3115—3120—3130—3135—3140 X3140—Not Annealed

S.A.E. 3140—X3140—3150—Annealed

A.S.T.M. fine (5-8) grain size

Identification Colors: S.A.E. 3115, 3120—Black and Yellow; S.A.E. 3130—Black and Pink; S.A.E. 3135, 3140, X3140, not annealed—Black and Red; S.A.E. 3140, X3140, annealed—Blue and Red—S.A.E. 3150, annealed—White and Brown.

Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Size Extra	Stock Lengths, Feet					
			S.A.E. 3115 3120	S.A.E. *3130	S.A.E. 3135 3140	S.A.E. X3140	S.A.E. *3140 *X3140	S.A.E. *3150
			Not Annealed				Annealed	
1/4	0.17	1.00	Chgo.		16	16		
5/16	0.26	.70	Chgo.	..	16	16	..	..
3/8	0.38	.40	Chgo.	..	16	16	..	..
7/16	0.51	.30	..	16	16	16	..	..
1/2	0.67	.20	16	16	16	16	16	..
9/16	0.84	.15			16	16		
5/8	1.04	.10	16	16	16	16	..	16
11/16	1.26	.10	..	..	16	16	..	..
3/4	1.50	Base	16	16	16	16	16	16
13/16	1.76	"	..	..	16	16	..	..
7/8	2.04	"	16	16	16	16	16	16
1	2.67	"	16	16	16	16	16	16
1-1/16	3.01	"	16	..	16	16	..	..
1-1/8	3.38	"	16	16	16	16	16	16
1-1/4	4.17	"	16	16	16	16	16	16
1-5/16	4.60	"	16		16	16		16
1-3/8	5.05	"	16	16	16	16	16	16
1-1/2	6.01	"	16	16	16	16	16	16
1-5/8	7.05	.10	16	16	16	16	16	16
1-11/16	7.60	.10	..	..	16	16	..	..
1-3/4	8.18	.10	16	16	16	16	16	16
1-7/8	9.39	.10	16	16	16	16	16	16
2	10.68	.10	16	16	16	16	16	16
2-1/8	12.06	.15	16	16	16	16	..	16
2-1/4	13.52	.15	16	16	16	16	16	16
2-3/8	15.06	.15	16	16	16	16	16	16
2-1/2	16.69	.15	16	16	16	16	16	16
2-5/8	18.40	.20	16	16	16	16	16	16
2-3/4	20.20	.20	16	16	16	16	16	16
2-7/8	22.07	.20	16	16	16	16		16
3	24.03	.20	16	16	16	16	16	16
3-1/8	26.08	.25	16	..	16	16	..	16
3-1/4	28.21	.25	16	16	16	16	16	16
3-3/8	30.42	.25	..	..	16	16	..	..
3-1/2	32.71	.25	16	16	16	16	16	16
3-5/8	35.09	.25	Chgo.	..	16	16	..	..
3-3/4	37.55	.25	16	16	16	16	16	16
3-7/8	40.13	.25	..	..	16	16	..	..
4	42.73	.25	16	16	16	16	16	16
4-1/8	45.44	.25	..	..	16	16	..	..
4-1/4	48.23	.25	16	16	16	16	16	16

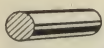
(Continued)

This stock includes bars 14 to 16 ft. which will be furnished occasionally unless you specify all 16 ft. bars.

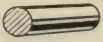
* Shipped from our Chicago Plant.

For cutting extras and S.A.E. specifications, see back of book.

CHROME NICKEL STEELS



HOT ROLLED ROUNDS—(Cont'd)



S.A.E. 3115—3120—3130—3135—3140
X3140—Not Annealed

S.A.E. 3140—X3140—3150—Annealed

A.S.T.M. fine (5-8) grain size

Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Size Extra	Stock Lengths, Feet					
			S.A.E. 3115 3120	S.A.E. *3130	S.A.E. 3135 3140	S.A.E. X3140	S.A.E. *3140 *X3140	S.A.E. *3150
			Not Annealed				Annealed	
(Continued)								
4-3/8	51.11	.25			16	16		
4-1/2	54.08	.25	16	16	16	16	16	16
4-5/8	57.12	.35	..	..	16	16	..	..
4-3/4	60.25	.35	16	16	16	16	16	16
5	66.76	.35	16	16	16	16	16	16
5-1/8	70.14	.45			16	16		
5-1/4	73.60	.45	16	..	16	16	16	16
5-1/2	80.78	.45	16	..	16	16	16	16
5-3/4	88.29	.55	16	..	16	16	16	16
6	96.13	.55	16	..	16	16	16	16
6-1/4	104.31	.65	Chgo.		16	16	16	16
6-1/2	112.82	.65	16	..	16	16	16	16
6-3/4	121.67	.75	16	..	16	16	..	16
7	130.85	.75	16	..	16	16	..	16
7-1/4	140.34	.75	Clev.	..	16	16	..	16
7-1/2	150.21	.75	16		16	16		16
7-3/4	160.80	.85	Clev.	..	Chgo.	Chgo.	..	..
8	170.90	1.10	16	..	16	16	..	16
8-1/4	181.73	1.50	..	..	..	..	..	16
8-1/2	192.91	1.50						16
8-3/4	204.42	1.50	..	..	..	..	..	16
9	216.27	1.50	..	..	..	..	..	16
9-1/2	240.97	1.50	..	..	..	..	..	16
10	267.00	1.50						16

This stock includes bars 14 to 16 ft. which will be furnished occasionally unless you indicate that all 16 ft. bars are desired.

* Shipped from our Chicago Plant.

HOT ROLLED SQUARES

S.A.E. 3135—3140—X3140
Not Annealed

A.S.T.M. fine (5-8) grain size

Machine Straightened

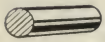
Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Feet	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Feet
1	3.40	Base	Chgo. 16	2½	21.25	.15	16
1¼	5.31	"	Chgo. 16	3	30.60	.20	16
1½	7.65	"	16	3½	41.65	.25	16
1¾	10.41	.10	16	4	54.40	.25	16
2	13.60	.10	16	5	85.00	.35	Chgo. 16
2¼	17.21	.15	Chgo. 16				

For cutting extras, see back of book.

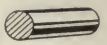
Heat Treat. Alloys 117
Tool Steel 123
Sheets 12[illegible]
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tubr Babbi 203
[illegible]weldi Rod 21[illegible]
Bolt Rei[illegible] 22
Data 243
C[illegible]

CHROME NICKEL STEELS

COLD FINISHED ROUNDS



S.A.E. 3115—3120—Not Annealed



S.A.E. 3135—3140—X3140—X3145—Annealed

A.S.T.M. fine (5-8) grain size

All sizes $2\frac{15}{16}$" and larger are Turned and Polished

Identification Colors: S.A.E. 3115, 3120—Black and Yellow; S.A.E. 3135, 3140, X3140—Blue and Red; S.A.E. X3145—White and Brown.

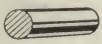
Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet S.A.E. 3115 3120	S.A.E. Anl'd. 3135 3140 X3140	S.A.E. Anl'd. *X3145
1/8	.042	4.00	12		
3/16	.094	2.50	..	Chgo. 12	..
1/4	.167	1.25	12	12	..
5/16	.261	1.00	12	12	..
3/8	.376	.90	12	12	..
7/16	.511	.70	12	12	
1/2	.668	.70	12	12	..
9/16	.845	.70	12	12	..
5/8	1.04	.55	12	12	..
11/16	1.26	.45	12	12	..
3/4	1.50	.45	12	12	
13/16	1.76	.40	12	12	..
7/8	2.04	.40	12	12	12
15/16	2.34	.40	Chgo. 12	12	..
1	2.67	.40	12	12	..
1-1/16	3.01	.40	12	12	
1-1/8	3.38	.40	12	12	..
1-3/16	3.77	.40	12	12	..
1-1/4	4.17	.40	12	12	12
1-5/16	4.60	.40	Buff. 12	12	..
1-3/8	5.05	.40	Buff. 12	12	12
1-7/16	5.52	.40	Buff. 12	12	..
1-1/2	6.01	.40	12	12	12
1-9/16	6.52	.45	Det. 12	Chgo. 12	..
1-5/8	7.05	.45	12	12	..
1-11/16	7.60	.45	Det. 12	12	
1-3/4	8.18	.45	12	12	..
1-13/16	8.77	.45	Clev. 12	Chgo. 12	..
1-7/8	9.39	.45	12	12	..
1-15/16	10.02	.45	12	12	..
2	10.68	.45	12	12	
2-1/16	11.36	.45	Chgo. 12	Chgo. 12	..
2-1/8	12.06	.45	Buff. 12	12	12
2-3/16	12.78	.45	12	12	..
2-1/4	13.52	.45	12	12	..
2-5/16	14.28	.45	Chgo. 12	Chgo. 12	
2-3/8	15.06	.45	Buff. 12	12	..
2-7/16	15.87	.45	Chgo. 12	12	..
2-1/2	16.69	.45	Buff. 12	12	12
2-9/16	17.53	.50	..	Det. 12	..
2-5/8	18.40	.50	12	12	
2-11/16	19.29	.50	Clev. 12	Chgo. 12	..
2-3/4	20.19	.50	12	12	..
2-13/16	21.12	.50	..	Chgo. 12	..
2-7/8	22.07	.50	Chgo. 12	12	..
2-15/16	23.06	.70	Chgo. 12	12	12

(Continued)

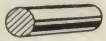
Some random lengths occasionally furnished.

* Shipped from our Cincinnati plant.

CHROME NICKEL STEELS



COLD FINISHED ROUNDS—(Cont'd)



S.A.E. 3115—3120—Not Annealed

S.A.E. 3135—3140—X3140—X3145—Annealed

A.S.T.M. fine (5-8) grain size

All sizes $2\frac{15}{16}$" and larger are Turned and Polished

Identification Colors: S.A.E. 3115, 3120—Black and Yellow; S.A.E. 3135, 3140, X3140—Blue and Red; S.A.E. X3145—White and Brown.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet S.A.E. 3115 3120	S.A.E. Anl'd. 3135 3140 X3140	S.A.E. Anl'd. *X3145
(Continued)					
3	24.03	.70	12	12	12
3-1/8	26.08	.75	12	12	..
3-1/4	28.20	.75	12	12	..
3-3/8	30.42	.75	Chgo. 12	Chgo. 12	..
3-7/16	31.55	.85	..	12	..
3-1/2	32.71	.85	Buff. 12	12	..
3-5/8	35.09	.90	..	Chgo. 12	..
3-3/4	37.55	.90	12	12	..
3-7/8	40.13	.90	..	Chgo. 12	..
4	42.73	1.00	Buff. 12	Chgo. 12	..
4-1/8	45.44	1.10	..	Chgo. 12	..
4-1/4	48.23	1.10	Chgo. 12	Chgo. 12	..
4-3/8	51.11	1.10	..	Chgo. 12	..
4-7/16	52.58	1.20	..	Chgo. 12	..
4-1/2	54.08	1.20	Chgo. 12	12	..
4-5/8	57.17	1.20	..	Chgo. 12	..
4-3/4	60.25	1.20	Chgo. 12	Chgo. 12	..
4-15/16	65.10	1.30	..	Chgo. 12	..
5	66.76	1.30	Chgo. 12	12	..
5-1/4	73.60	1.30	Chgo. 12	Chgo. 12	..
5-1/2	80.78	1.75	Chgo. 12	Clev. 12	..
5-3/4	88.30	1.75	Chgo. 12	Chgo. 12	..
6	96.13	2.25	Chgo. 12	Chgo. 12	..

Some random lengths occasionally furnished.
* Shipped from our Cincinnati plant.

COLD FINISHED SQUARES

S.A.E. 3135—3140—X3140

Annealed

A.S.T.M. fine (5-8) grain size

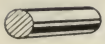
Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Feet	Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Feet
1/4	.21	2.50	12	1 1/4	5.31	1.05	12
5/16	.33	2.50	12	1 3/8	6.43	1.25	Chgo. 12
3/8	.48	1.75	12	1 1/2	7.65	1.25	Chgo. 12
7/16	.65	1.75	12	1 5/8	8.98	1.25	Chgo. 12
1/2	.85	1.30	12	1 3/4	10.41	1.25	Chgo. 12
9/16	1.08	1.30	12	1 7/8	11.96	1.25	Chgo. 12
5/8	1.34	1.30	12	2	13.60	1.25	Chgo. 12
3/4	1.92	1.05	12	2 1/4	17.21	2.00	Chgo. 12
7/8	2.60	1.05	12	2 1/2	21.25	2.00	Chgo. 12
1	3.40	1.05	12	2 3/4	25.71	2.00	Chgo. 12
1 1/8	4.30	1.05	12	3	30.60	2.00	Chgo. 12

For cutting extras, see back of book.
For S.A.E. specifications, see back of book.
For weight of various length bars, see tables in back of book.

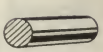
Heat Treat Alloys 117
Tool Steel 123
Sheets
Spec. Sheets 157
Stainless 167
Tubing 189
Bbbi 203
Rod
Bolt Rei 22
Data 243

CHROME NICKEL STEELS

COLD FINISHED ROUNDS



S.A.E. 3115—3120—Not Annealed



S.A.E. 3135—3140—X3140—X3145—Annealed

A.S.T.M. fine (5-8) grain size

All sizes $2\frac{15}{16}$" and larger are Turned and Polished

Identification Colors: S.A.E. 3115, 3120—Black and Yellow; S.A.E. 3135, 3140, X3140—Blue and Red; S.A.E. X3145—White and Brown.

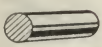
Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet		
			S.A.E. 3115 3120	S.A.E. Anl'd. 3135 3140 X3140	S.A.E. Anl'd. *X3145
1/8	.042	4.00	12	12	
3/16	.094	2.50	..	Chgo. 12	..
1/4	.167	1.25	12	12	..
5/16	.261	1.00	12	12	..
3/8	.376	.90	12	12	..
7/16	.511	.70	12	12	
1/2	.668	.70	12	12	..
9/16	.845	.70	12	12	..
5/8	1.04	.55	12	12	..
11/16	1.26	.45	12	12	..
3/4	1.50	.45	12	12	
13/16	1.76	.40	12	12	..
7/8	2.04	.40	12	12	12
15/16	2.34	.40	Chgo. 12	12	..
1	2.67	.40	12	12	..
1-1/16	3.01	.40	12	12	
1-1/8	3.38	.40	12	12	..
1-3/16	3.77	.40	12	12	..
1-1/4	4.17	.40	12	12	12
1-5/16	4.60	.40	Buff. 12	12	..
1-3/8	5.05	.40	Buff. 12	12	12
1-7/16	5.52	.40	Buff. 12	12	..
1-1/2	6.01	.40	12	12	12
1-9/16	6.52	.45	Det. 12	Chgo. 12	..
1-5/8	7.05	.45	12	12	..
1-11/16	7.60	.45	Det. 12	12	
1-3/4	8.18	.45	12	12	..
1-13/16	8.77	.45	Clev. 12	Chgo. 12	..
1-7/8	9.39	.45	12	12	..
1-15/16	10.02	.45	12	12	..
2	10.68	.45	12	12	
2-1/16	11.36	.45	Chgo. 12	Chgo. 12	..
2-1/8	12.06	.45	Buff. 12	12	12
2-3/16	12.78	.45	12	12	..
2-1/4	13.52	.45	12	12	..
2-5/16	14.28	.45	Chgo. 12	Chgo. 12	
2-3/8	15.06	.45	Buff. 12	12	..
2-7/16	15.87	.45	Chgo. 12	12	..
2-1/2	16.69	.45	Buff. 12	12	12
2-9/16	17.53	.50	..	Det. 12	..
2-5/8	18.40	.50	12	12	
2-11/16	19.29	.50	Clev. 12	Chgo. 12	..
2-3/4	20.19	.50	12	12	..
2-13/16	21.12	.50	..	Chgo. 12	..
2-7/8	22.07	.50	Chgo. 12	12	..
2-15/16	23.06	.70	Chgo. 12	12	12

(Continued)

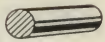
Some random lengths occasionally furnished.

* Shipped from our Cincinnati plant.

CHROME NICKEL STEELS



COLD FINISHED ROUNDS—(Cont'd)



S.A.E. 3115—3120—Not Annealed

S.A.E. 3135—3140—X3140—X3145—Annealed

A.S.T.M. fine (5-8) grain size

All sizes $2\frac{15}{16}$" and larger are Turned and Polished

Identification Colors: S.A.E. 3115, 3120—Black and Yellow; S.A.E. 3135, 3140, X3140—Blue and Red; S.A.E. X3145—White and Brown.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Feet S.A.E. 3115 3120	S.A.E. Anl'd. 3135 3140 X3140	S.A.E. Anl'd. *X3145
(Continued)					
3	24.03	.70	12	12	12
3-1/8	26.08	.75	12	12	..
3-1/4	28.20	.75	12	12	..
3-3/8	30.42	.75	Chgo. 12	Chgo. 12	..
3-7/16	31.55	.85	..	12	..
3-1/2	32.71	.85	Buff. 12	12	..
3-5/8	35.09	.90	..	Chgo. 12	..
3-3/4	37.55	.90	12	12	..
3-7/8	40.13	.90	..	Chgo. 12	..
4	42.73	1.00	Buff. 12	Chgo. 12	..
4-1/8	45.44	1.10	..	Chgo. 12	..
4-1/4	48.23	1.10	Chgo. 12	Chgo. 12	..
4-3/8	51.11	1.10	..	Chgo. 12	..
4-7/16	52.58	1.20	..	Chgo. 12	..
4-1/2	54.08	1.20	Chgo. 12	12	..
4-5/8	57.17	1.20	..	Chgo. 12	..
4-3/4	60.25	1.20	Chgo. 12	Chgo. 12	..
4-15/16	65.10	1.30	..	Chgo. 12	..
5	66.76	1.30	Chgo. 12	12	..
5-1/4	73.60	1.30	Chgo. 12	Chgo. 12	..
5-1/2	80.78	1.75	Chgo. 12	Clev. 12	..
5-3/4	88.30	1.75	Chgo. 12	Chgo. 12	..
6	96.13	2.25	Chgo. 12	Chgo. 12	..

Some random lengths occasionally furnished.
* Shipped from our Cincinnati plant.

COLD FINISHED SQUARES

S.A.E. 3135—3140—X3140

Annealed

A.S.T.M. fine (5-8) grain size

Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Feet	Size in Inches	Wt. Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Feet
1/4	.21	2.50	12	1 1/4	5.31	1.05	12
5/16	.33	2.50	12	1 3/8	6.43	1.25	Chgo. 12
3/8	.48	1.75	12	1 1/2	7.65	1.25	Chgo. 12
7/16	.65	1.75	12	1 5/8	8.98	1.25	Chgo. 12
1/2	.85	1.30	12	1 3/4	10.41	1.25	Chgo. 12
9/16	1.08	1.30	12	1 7/8	11.96	1.25	Chgo. 12
5/8	1.34	1.30	12	2	13.60	1.25	Chgo. 12
3/4	1.92	1.05	12	2 1/4	17.21	2.00	Chgo. 12
7/8	2.60	1.05	12	2 1/2	21.25	2.00	Chgo. 12
1	3.40	1.05	12	2 3/4	25.71	2.00	Chgo. 12
1 1/8	4.30	1.05	12	3	30.60	2.00	Chgo. 12

For cutting extras, see back of book.
For S.A.E. specifications, see back of book.
For weight of various length bars, see tables in back of book.

CHROME NICKEL STEELS

COLD FINISHED HEXAGONS

S.A.E. 3115—3120—3135—3140—X3140

A.S.T.M. fine (5-8) grain size

Identification Colors: S.A.E. 3115, 3120—Black and Yellow; S.A.E. 3135, 3140, X3140—Blue and Red

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lengths, Ft. S.A.E. *3115 *3120	Stock Lengths, Ft. S.A.E. Anl'd. 3135 3140 X3140
1/4	.184	2.50	..	Clev. 12
5/16	.288	1.75	..	Clev. 12
3/8	.414	1.75	12	Clev. 12
7/16	.564	1.25	12	12
1/2	.736	.90	12	12
9/16	.923	.80	..	12
5/8	1.15	.70	..	12
11/16	1.39	.60	..	Clev. 12
3/4	1.66	.60	12	12
13/16	1.94	.60	..	Chgo. 12
7/8	2.25	.55	..	12
15/16	2.59	.55	..	12
1	2.94	.50	..	12
1-1/16	3.32	.50	..	12
1-1/8	3.73	.45	..	12
1-3/16	4.15	.45	..	12
1-1/4	4.60	.45	..	12
1-5/16	5.07	.50	..	12
1-3/8	5.57	.50	..	12
1-7/16	6.09	.50	..	12
1-1/2	6.62	.60	..	12
1-9/16	7.18	.60	..	Clev. 12
1-5/8	7.78	.60	..	12
1-11/16	8.38	.60	..	Clev. 12
1-3/4	9.02	.60	..	12
1-13/16	9.67	.60	..	Chgo. 12
1-7/8	10.35	.60	..	12
2	11.77	.75	..	12
2-1/4	14.91	1.00	..	Chgo. 12
2-3/8	15.06	1.00	..	Clev. 12
2-1/2	18.40	1.00	..	Chgo. 12
2-3/4	22.27	1.00	..	Chgo. 12
3	26.50	1.50	..	Chgo. 12

* Shipped from our Cleveland and Chicago Plants.

For cutting extras, see back of book.

For S.A.E. specifications, see back of book.

For weight of various length bars, see tables in back of book.

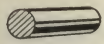
FORGINGS AND SPECIAL ANALYSIS STEELS

We can supply promptly, forgings, such as blocks, special section bars, rings, discs, etc., in practically any alloy composition, either annealed or heat treated.

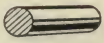
RYERSON STEEL-SERVICE

Large and complete stocks, modern cutting and handling equipment manned by experienced crews, speedy dispatching methods—these are your assurance of Immediate Steel from Ryerson.

CHROME NICKEL STEELS



HOT ROLLED ROUNDS
S.A.E. 3135—HEAT TREATED

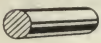


A.S.T.M. fine (5-8) grain size

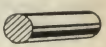
Identification Colors: Red and Purple

Hot Rolled—Heat Treated—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
5/8	1.04	.10	Chgo. 20
3/4	1.50	Base	20
7/8	2.04	"	20
1	2.67	"	20
1 1/8	3.38	"	20
1 1/4	4.17	"	20
1 3/8	5.05	"	20
1 1/2	6.01	"	20
1 5/8	7.05	.10	20
1 3/4	8.18	.10	20
1 7/8	9.39	.10	20
2	10.68	.10	20
2 1/8	12.06	.15	Chgo. 20
2 1/4	13.52	.15	20
2 3/8	15.06	.15	Chgo. 20
2 1/2	16.69	.15	20
2 5/8	18.40	.20	20
2 3/4	20.20	.20	20
2 7/8	22.07	.20	Chgo. 20
3	24.03	.20	20
3 1/8	26.08	.25	Chgo. 20
3 1/4	28.21	.25	20
3 3/8	30.42	.25	Chgo. 20
3 1/2	32.71	.25	20
3 5/8	35.09	.25	Chgo. 20
3 3/4	37.55	.25	20
4	42.73	.25	20
4 1/4	48.23	.25	20
4 1/2	54.08	.25	20
4 3/4	60.25	.35	20
5	66.76	.35	20
5 1/4	73.60	.45	Chgo. 20
5 1/2	80.78	.45	Chgo. 20
5 3/4	88.29	.55	Chgo. 20
6	96.13	.55	Chgo. 20
6 1/4	104.31	.65	Chgo. 20
6 1/2	112.82	.65	Chgo. 20
6 3/4	121.67	.75	Chgo. 20
7	130.85	.75	Chgo. 20
7 1/2	150.21	.75	Chgo. 20



HOT ROLLED ROUNDS
S.A.E. 3250—ANNEALED



A.S.T.M. fine (5-8) grain size

Identification Colors: Aluminum and Pink

Hot Rolled—Annealed—Machine Straightened

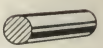
Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
1/2	0.67	.20	18
5/8	1.04	.10	18
3/4	1.50	Base	18
7/8	2.04	"	18
1	2.67	"	18
1 1/16	3.01	"	Clev. 18
1 1/8	3.38	"	18
1 1/4	4.17	"	18
1 3/8	5.05	"	18
1 1/2	6.01	"	18
1 5/8	7.05	.10	18
1 3/4	8.18	.10	18
1 7/8	9.39	.10	18
2	10.68	.10	18
2 1/8	12.06	.15	18
2 1/4	13.52	.15	18
2 3/8	15.06	.15	18
2 1/2	16.69	.15	18
2 5/8	18.40	.20	Chgo. 18
2 3/4	20.20	.20	18
2 7/8	22.07	.20	Clev. 18
3	24.03	.20	18
3 1/8	26.08	.25	Chgo. 18
3 1/4	28.21	.25	18
3 3/8	30.42	.25	Chgo. 16
3 1/2	32.71	.25	18
3 3/4	37.55	.25	18
4	42.73	.25	18
4 1/8	45.44	.25	Clev. 18
4 1/4	48.23	.25	18
4 1/2	54.08	.25	18
4 3/4	60.25	.35	Chgo. 18
5	66.76	.35	18
5 1/4	73.60	.45	Chgo. 18
5 1/2	80.78	.45	Chgo. 18
5 3/4	88.29	.55	Chgo. 18
6	96.13	.55	Chgo. 18

This stock includes bars 16 to 18 ft. which will be furnished occasionally unless you indicate that all 18 ft. bars are desired.

For cutting extras and S.A.E. specifications, see back of book.

CHROME MOLYBDENUM STEEL

HOT ROLLED ROUNDS
S.A.E. X4130—ANNEALED



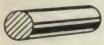
An Electric Furnace Product, Aircraft Quality. Conforms to U. S. Navy Specification 46-S-23F and U. S. Army Specification 57-107-19B, subject to Magnaflux Inspection.

A.S.T.M. fine (5-8) grain size

Identification Colors: Yellow and Green

Hot Rolled—Annealed—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
3/4	1.50	Base	Clev. 16
1	2.67	"	Clev. 16
1 1/8	3.38	"	Clev. 16
1 1/4	4.17	"	Clev. 16
1 3/8	5.05	"	Clev. 16
1 1/2	6.01	"	Clev. 16
1 5/8	7.05	.10	16
1 3/4	8.18	.10	16
1 7/8	9.39	.10	Chgo. 16
2	10.68	.10	16
2 1/8	12.06	.15	16
2 1/4	13.52	.15	16
2 1/2	16.69	.15	16
2 3/4	20.20	.20	16
3	24.03	.20	16
3 1/4	28.21	.25	Chgo. 16
3 1/2	32.71	.25	Chgo. 16
3 3/4	37.55	.25	Chgo. 16
4	42.73	.25	Chgo. 16
4 1/4	48.23	.25	Chgo. 16
4 1/2	54.08	.25	Chgo. 16
4 3/4	60.25	.35	Chgo. 16
5	66.76	.35	Chgo. 16
5 1/4	73.60	.45	Clev. 16
5 1/2	80.78	.45	Chgo. 16
5 3/4	88.30	.55	Clev. 16
6	96.13	.55	Chgo. 16



COLD FINISHED ROUNDS
S.A.E. X4130—ANNEALED

An Electric Furnace Product, Aircraft Quality. Conforms to U. S. Navy Specification 46-S-23F and U. S. Army Specification 57-107-19B, subject to Magnaflux Inspection.

A.S.T.M. fine (5-8) grain size

Identification Colors: Yellow and Green

Cold Finished—Annealed—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
5/16	.094	2.50	12
1/4	.167	1.25	12
5/16	.261	1.00	12
3/8	.376	.90	12
7/16	.511	.70	12
1/2	.668	.70	12
9/16	.845	.70	12
5/8	1.04	.55	12
11/16	1.26	.45	12
3/4	1.50	.45	12
13/16	1.76	.40	Chgo. 12
7/8	2.04	.40	12
15/16	2.34	.40	12
1	2.67	.40	12
1 1/16	3.01	.40	12
1 1/8	3.38	.40	12
1 1/4	4.17	.40	12
1 3/8	5.05	.40	12
1 1/2	6.01	.40	12

HOT ROLLED BILLETS
S.A.E. X4130—ANNEALED

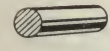
An Electric Furnace Product. Conforms to U. S. Navy Specification 46-S-23F and U. S. Army Specification 57-107-19B.

Shipped from our Cleveland Plant

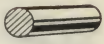
Identification Colors: Yellow and Green

Size in Inches	Random Lengths, Ft.	Size in Inches	Random Lengths, Ft.
4x4	6 to 8	6x6	6 to 8

CHROME MOLYBDENUM STEEL



COLD FINISHED ROUNDS
S.A.E. X4130—HEAT TREATED



An Electric Furnace Product, Aircraft Quality
Subject to Magnaflux Inspection

Shipped from our Chicago Plant

Conforms to U. S. Army Specification 57-107-19B of June 20, 1933 —Physical E—Surface D, Cold Drawn to standard size tolerances as follows: Rounds up to 2" inclusive, +.000" to —.006".

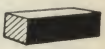
A.S.T.M. fine (5-8) grain size

Identification Colors: Gold and Green

Cold Finished—Heat Treated

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
1/4	.167	1.25	12	15/16	2.34	.40	12
5/16	.261	1.00	12	1	2.67	.40	12
3/8	.376	.90	12	1 1/16	3.01	.40	12
7/16	.511	.70	12	1 1/8	3.38	.40	12
1/2	.668	.70	12	1 1/4	4.17	.40	12
9/16	.845	.70	12	1 3/8	5.05	.40	12
5/8	1.04	.55	12	1 1/2	6.01	.40	12
11/16	1.26	.45	12	1 5/8	7.05	.45	12
3/4	1.50	.45	12	1 3/4	8.18	.45	12
13/16	1.76	.40	12	1 7/8	9.39	.45	12
7/8	2.04	.40	12	2	10.68	.45	12

COLD FINISHED SQUARES
S.A.E. X4130—HEAT TREATED



An Electric Furnace Product, Aircraft Quality
Subject to Magnaflux Inspection

Shipped from our Chicago Plant

Conforms to U. S. Army Specification 57-107-19B of June 20, 1933 —Physical E—Surface D, Cold Drawn to standard size tolerances as follows: Squares up to 2" inclusive, +.000" to —.008".

A.S.T.M. fine (5-8) grain size

Identification Colors: Gold and Green

Cold Finished—Heat Treated

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
3/8	.48	1.75	12	1	3.40	1.05	12
1/2	.85	1.30	12	1 1/4	5.31	1.05	12
5/8	1.34	1.30	12	1 1/2	7.65	1.25	12
3/4	1.92	1.05	12	1 3/4	10.41	1.25	12
7/8	2.60	1.05	12	2	13.60	1.25	12

Heat Treat. Alloys 117
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CHROME MOLYBDENUM STEEL

COLD FINISHED HEXAGONS

S.A.E. X4130—HEAT TREATED

An Electric Furnace Product, Aircraft Quality
Subject to Magnaflux Inspection

Shipped from our Chicago Plant

Conforms to U. S. Army Specification 57-107-19B of June 20, 1933 —Physical E—Surface D except, Cold Drawn to standard size tolerances as follows: Hexagons up to 2" inclusive, +.000" to —.006".

A.S.T.M. fine (5-8) grain size

Identification Colors: Gold and Green

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
7/16	.564	1.25	12	1 1/8	3.73	.45	12
1/2	.736	.90	12	1 1/4	4.60	.45	12
5/8	1.15	.70	12	1 3/8	5.57	.50	12
3/4	1.66	.60	12	1 1/2	6.62	.60	12
7/8	2.25	.55	12	1 3/4	9.02	.60	12
1	2.94	.50	12	2	11.77	.75	12

HOT ROLLED S.A.E. X4130 STRIP

Normalized, Pickled and Oiled

Shipped from our Chicago Plant

Conforms to U. S. Army Specification 57-136-8C and U. S. Navy Specification 47-S-14B. .25 to .35 Carbon, Chrome, Molybdenum Steel.

Identification Colors: Yellow and Green

Thickness	Size in Inches	Wt. Per Sq. Ft. Lbs.	Thickness	Size in Inches	Wt. Per Sq. Ft. Lbs.
.0313	24x72	1.309	.156	24x72	6.524
.0375	24x72	1.568	.1875	24x72	7.841
.050	24x72	2.091	.250	24x72	10.20
.0625	24x72	2.614	.3125	24x72	12.75
.0938	24x72	3.923	.375	24x72	15.30
.125	24x72	5.228			

"GUIDE TO TREATMENT"

Shipped With the Steel

Ryerson Certified Alloy Steels are not only shipped quickly, but complete information arrives with the bars, including chemical and physical properties and record of heat treatment results. In this way, the heat treater knows what is in each alloy and exactly how to treat it for the best possible results.

This unique alloy plan, never before attempted by any steel service company, is the outstanding feature of Ryerson Certified Steels.

For high, uniform quality, specify Ryerson Certified Steels. They cost no more and quick shipment is assured.

CHROME MOLYBDENUM STEEL

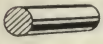
HOT ROLLED, HEAT TREATED—S.A.E. 4140

Identification Colors: Black and White

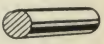
These heat treated bars of selected Chrome Molybdenum Steel S.A.E. 4140 analysis have been given a special treatment to reduce warpage and give maximum machinability, consistent with strength.

Typical Minimum Physical Properties

Size	Tensile Strength Lbs. Per Sq. In.	Yield Point Lbs. Per Sq. In.	Elong. in 2 In.	Red. of Area	Max. Brinell Hardness
Under 2½" Rd.	125,000	105,000	16%	50%	321
2½" to under 4" Rd.	115,000	95,000	16%	45%	321
4" and over	110,000	85,000	16%	45%	321



ROUNDS



A.S.T.M. fine (5-8) grain size

Hot Rolled—Heat Treated—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
⅜	.376	.40	16	2¾	20.20	.20	16,20
½	.668	.20	16	2⅞	22.07	.20	16,20
9/16	.845	.15	16	3	24.03	.20	16,20
⅝	1.04	.10	16	3⅛	26.08	.25	16,20
¾	1.50	Base	16	3¼	28.21	.25	16,20
⅞	2.04	"	16	3⅜	30.42	.25	16,20
1	2.67	"	16	3½	32.71	.25	16,20
1⅛	3.38	"	16	3⅝	35.09	.25	16,20
1¼	4.17	"	16	3¾	37.55	.25	16,20
1⅜	5.05	"	16	3⅞	40.13	.25	16,20
1½	6.01	"	16	4	42.73	.25	16,20
1⅝	7.05	.10	16	4⅛	45.44	.25	16,20
1¾	8.18	.10	16	4¼	48.23	.25	16,20
1⅞	9.39	.10	16	4½	54.08	.25	16,20
2	10.68	.10	16	4⅝	57.12	.35	16,20
2⅛	12.06	.15	16	4¾	60.25	.35	16,20
2¼	13.52	.15	16	5	66.76	.35	16,20
2⅜	15.06	.15	16	5¼	73.60	.45	Chgo. 16
2½	16.69	.15	16,20	5½	80.78	.45	Chgo. 16
2⅝	18.40	.20	16,20				

SQUARES—S.A.E. 4140

A.S.T.M. fine (5-8) grain size

Hot Rolled—Heat Treated—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
1½	7.65	Base	16	2¾	25.71	.20	16,20
1⅝	8.98	.10	16	3	30.60	.20	16,20
1¾	10.41	.10	16	3½	41.65	.25	16,20
2	13.60	.10	16	4	54.40	.25	16,20
2¼	17.21	.15	Chgo. 16	4½	69.85	.25	16,20
2½	21.25	.15	16,20				

For cutting extras, see back of book.

Heat Treat. Alloys 117
Tool Steel 123
Sheets 12[illegible]
Spec. Sheets 157
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Tubing 189
Blr. Tube Babbi[illegible] 203
[illegible]dain Rod 21[illegible]
Bolt Rei[illegible] 22[illegible]
Data 243

CHROME MOLYBDENUM STEEL

COLD FINISHED, HEAT TREATED—S.A.E. 4140

Identification Colors: Black and White

Cold Finished, Heat Treated Chrome Molybdenum S.A.E. 4140 answers to the same general physical description as the Hot Rolled, except that the ductility as measured by elongation and reduction of area will be slightly lower, owing to the effect of cold drawing.

ROUNDS

A.S.T.M. fine (5-8) grain size

Cold Finished—Heat Treated—Machine Straightened

All sizes 2 15/16" and larger are Turned and Polished

Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.
1/4	.167	1.25	Chgo. 12
5/16	.261	1.00	Chgo. 12
3/8	.376	.90	12
7/16	.511	.70	12
1/2	.668	.70	12
9/16	.845	.70	12
5/8	1.04	.55	12
11/16	1.26	.45	12
3/4	1.50	.45	12
13/16	1.76	.40	12
7/8	2.04	.40	12
15/16	2.34	.40	12
1	2.67	.40	12
1 1/16	3.01	.40	12
1 1/8	3.38	.40	12
1 3/16	3.77	.40	12
1 1/4	4.17	.40	12
1 5/16	4.60	.40	12
1 3/8	5.05	.40	12
1 7/16	5.52	.40	12
1 1/2	6.01	.40	12
1 9/16	6.52	.45	Chgo. 12
1 5/8	7.05	.45	12
1 11/16	7.60	.45	12
1 3/4	8.18	.45	12
1 13/16	8.77	.45	12
1 7/8	9.39	.45	12
1 15/16	10.02	.45	12
2	10.68	.45	12
2 1/16	11.36	.45	12
2 1/8	12.06	.45	12
2 3/16	12.78	.45	Chgo. 12
2 1/4	13.52	.45	12
2 5/16	14.28	.45	Chgo. 12
2 3/8	15.06	.45	12
2 7/16	15.87	.45	12
2 1/2	16.69	.45	12
2 5/8	18.40	.50	12
2 11/16	19.29	.50	12
2 3/4	20.19	.50	12
2 13/16	21.12	.50	12
2 7/8	22.07	.50	Chgo. 12
2 15/16	23.06	.70	12
3	24.03	.70	12
3 1/16	25.04	.70	Chgo. 12
3 1/8	26.08	.75	Chgo. 12
3 3/16	27.13	.75	12
3 1/4	28.20	.75	12
3 5/16	29.30	.75	Chgo. 12
3 3/8	30.42	.75	12
3 7/16	31.55	.85	12
3 1/2	32.71	.85	12
3 5/8	35.09	.90	Chgo. 12
3 11/16	36.31	.90	Chgo. 12
3 3/4	37.55	.90	Chgo. 12
3 7/8	40.13	.90	Chgo. 12
3 15/16	41.40	1.00	12
4	42.73	1.00	12
4 1/8	45.44	1.10	Chgo. 12
4 1/4	48.23	1.10	Chgo. 12
4 3/8	51.11	1.10	Chgo. 12
4 1/2	54.08	1.20	Chao. 12

SQUARES—S.A.E. 4140

A.S.T.M. fine (5-8) grain size

Cold Finished—Heat Treated—Machine Straightened

Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.
3/4	1.92	1.05	Chgo. 12
7/8	2.60	1.05	Chgo. 12
1	3.400	1.05	12
1 1/8	4.303	1.05	12
1 1/4	5.314	1.05	12
1 3/8	6.43	1.25	Chgo. 12
1 1/2	7.65	1.25	Chgo. 12
1 5/8	8.98	1.25	Chgo. 12
1 3/4	10.41	1.25	Chao. 12
1 7/8	11.96	1.25	Chgo. 12
2	13.60	1.25	Chgo. 12
2 1/8	15.36	2.00	Chgo. 12
2 1/4	17.21	2.00	Chgo. 12
2 3/8	19.19	2.00	Chgo. 12
2 1/2	21.25	2.00	Chgo. 12
2 3/4	25.71	2.00	Chgo. 12
3	30.60	2.00	Chgo. 12

CHROME MOLYBDENUM STEEL

COLD FINISHED, HEAT TREATED—S.A.E. 4140 (Cont'd)

HEXAGONS

A.S.T.M. fine (5-8) grain size

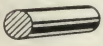
Identification Colors: Black and White

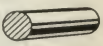
Cold Finished—Heat Treated—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
7/16	.564	1.25	12	1 1/4	4.601	.45	12
1/2	.737	.90	12	1 5/16	5.070	.50	12
9/16	.932	.80	12	1 3/8	5.567	.50	Chgo. 12
5/8	1.150	.70	12	1 7/16	6.090	.50	Chgo. 12
11/16	1.390	.60	12	1 1/2	6.625	.60	12
3/4	1.658	.60	12	1 5/8	7.775	.60	12
13/16	1.944	.60	12	1 3/4	9.018	.60	12
7/8	2.256	.55	12	1 7/8	10.355	.60	Chgo. 12
15/16	2.590	.55	12	2	11.780	.75	12
1	2.944	.50	12	2 1/4	14.911	1.00	Chgo. 12
1 1/16	3.320	.50	12	2 1/2	18.403	1.00	Chgo. 12
1 1/8	3.727	.45	12	2 3/4	22.270	1.00	12
1 3/16	4.152	.45	Chgo. 12	3	26.500	1.50	Chgo. 12

CHROME MOLYBDENUM STEEL

HOT ROLLED ROUNDS





S.A.E. 4140—NOT ANNEALED

A.S.T.M. fine (5-8) grain size

Identification Colors: Blue and Gold

Hot Rolled—Not Annealed—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
3/8	.376	.40	Chgo. 16	2 7/8	22.07	.20	16
7/16	.511	30	Chgo. 16	3	24.03	.20	16
1/2	0.668	.20	16	3 1/4	28.21	.25	16
5/8	1.04	.10	16	3 1/2	32.71	.25	16
3/4	1.50	Base	16	3 5/8	35.09	.25	Chgo. 16
7/8	2.04	"	16	3 3/4	37.55	.25	16
1	2.67	"	16	4	42.73	.25	16
1 1/8	3.38	"	16	4 1/4	48.23	.25	16
1 1/4	4.17	"	16	4 1/2	54.08	.25	16
1 3/8	5.05	"	16	4 3/4	60.25	.35	16
1 1/2	6.01	"	16	5	66.76	.35	16
1 5/8	7.05	.10	16	5 1/4	73.60	.45	16
1 3/4	8.18	.10	16	5 1/2	80.78	.45	16
1 7/8	9.39	.10	16	5 3/4	88.29	.55	Chgo. 16
2	10.68	.10	16	6	96.13	.55	16
2 1/8	12.06	.15	16	6 1/4	104.31	.65	Chgo. 16
2 1/4	13.52	.15	16	6 1/2	112.82	.65	Chgo. 16
2 3/8	15.06	.15	16	6 3/4	121.67	.75	Chgo. 16
2 1/2	16.69	.15	16	7	130.85	.75	Chgo. 16
2 5/8	18.40	.20	16	7 1/2	150.21	.75	Chgo. 16
2 3/4	20.20	.20	16	8	170.90	1.10	Chgo. 16

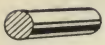
This stock includes bars 14 to 16 ft. which will be furnished occasionally unless you indicate that all 16 ft. bars are desired.

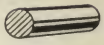
For cutting extras and S.A.E. specifications, see back of book.

Heat Treat. Alloys 117
Tool Steel 123
Sheets 13
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbi 203
Rod 21
Bolt Rei 22
Data 243

CHROME MOLYBDENUM STEEL

HOT ROLLED ROUNDS





S.A.E. 4140—ANNEALED

A.S.T.M. fine (5-8) grain size

Shipped from our Chicago Plant

Identification Colors: Blue and Green

Hot Rolled—Annealed—Machine Straightened

Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.	Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.
½	0.668	.20	16	2⅝	18.40	.20	16
⅝	1.04	.10	16	2¾	20.20	.20	16
¾	1.50	Base	16	2⅞	22.07	.20	16
⅞	2.04	"	16	3	24.03	.20	16
1	2.67	"	16	3¼	28.21	.25	16
1⅛	3.38	"	16	3¾	37.55	.25	16
1¼	4.17	"	16	4	42.73	.25	16
1⅜	5.05	"	16	4¼	48.23	.25	16
1½	6.01	"	16	4½	54.08	.25	16
1⅝	7.05	.10	16	4¾	60.25	.35	16
1¾	8.18	.10	16	5	66.76	.35	16
1⅞	9.39	.10	16	5¼	73.60	.45	16
2	10.68	.10	16	5½	80.78	.45	16
2⅛	12.06	.15	16	5¾	88.29	.55	16
2¼	13.52	.15	16	6	96.13	.55	16
2½	16.69	.15	16				

This stock includes bars 14 to 16 ft. which will be furnished occasionally unless you indicate that all 16 ft. bars are desired.

HOT ROLLED SQUARES

S.A.E. 4140—ANNEALED

A.S.T.M. fine (5-8) grain size

Identification Colors: Blue and Green

Hot Rolled—Annealed—Machine Straightened

Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.	Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.
⅜	.478	.40	16	1¾	10.414	.10	16
½	.850	.20	16	2	13.600	.10	16
⅝	1.328	.10	16	2½	21.250	.15	16
¾	1.913	Base	16	3	30.600	.20	16
⅞	2.600	"	16	3½	41.650	.25	16
1	3.400	"	16	4	54.400	.25	16
1¼	5.314	"	16	5	85.000	.35	Chgo. 16
1½	7.650	"	16				

CHROME MOLYBDENUM STEEL

HOT ROLLED FLATS

S.A.E. 4140—ANNEALED

A.S.T.M. fine (5-8) grain size

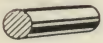
Identification Colors: Blue and Green

Hot Rolled—Annealed—Machine Straightened

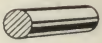
Size in Inches	Wt. Per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.
1/4x			
¾	.638	.15	16
1	.850	.15	16
1½	1.275	.15	16
2	1.700	.15	Chgo. 16
2½	2.125	.15	Chgo. 16
3	2.550	.15	Chgo. 16
4	3.400	.15	Chgo. 16
6	5.100	.15	Chgo. 16
3/8x			
¾	.956	.30	16
1	1.275	Base	16
1¼	1.594	"	16
1½	1.913	"	16
2	2.550	"	16
2½	3.188	"	Chgo. 16
3	3.825	"	Chgo. 16
4	5.100	"	Chgo. 16
5	6.375	"	Chgo. 16
6	7.650	"	Chgo. 16
1/2x			
¾	1.275	.30	Chgo. 16
1	1.700	Base	16
1¼	2.125	"	16
1½	2.550	"	16
2	3.400	"	16
2½	4.250	"	16
3	5.100	"	16
4	6.800	"	16
6	10.200	"	Chgo. 16
5/8x			
1	2.125	Base	16
1¼	2.656	"	16
1½	3.188	"	16
2	4.250	"	16
2½	5.313	"	Chgo. 16
3	6.375	"	Chgo. 16
4	8.500	"	Chgo. 16
6	12.750	"	Chgo. 16
3/4x			
1	2.550	Base	16
1¼	3.188	"	Chgo. 16
1½	3.825	"	16
2	5.100	"	16
2¼	5.738	"	16
2½	6.375	"	16
3	7.650	"	16
4	10.200	"	16
5	12.750	"	16
6	15.300	"	16
8	20.400	"	Chgo. 16
7/8x			
2	5.950	Base	Chgo. 16
2½	7.438	"	Chgo. 16
3	8.925	"	Chgo. 16
7/8x			
4	11.900	Base	Chgo. 16
6	17.850	"	Chgo. 16
1x			
1¼	4.250	Base	16
1½	5.100	"	16
1¾	5.950	"	16
2	6.800	"	16
2¼	7.650	"	Chgo. 16
2½	8.500	"	16
3	10.200	"	16
3½	11.900	"	Chgo. 16
4	13.600	"	16
5	17.000	"	Chgo. 16
6	20.400	"	16
8	27.200	"	Chgo. 16
12	40.800	"	Chgo. 16
1-1/4x			
1½	6.375	.10	16
2	8.500	.10	16
2½	10.625	.10	16
3	12.750	.10	16
3½	14.875	.10	Chgo. 16
4	17.000	.10	16
5	21.250	.10	Chgo. 16
6	25.500	.10	16
1-1/2x			
2	10.20	.10	16
2½	12.75	.10	16
3	15.30	.10	16
3½	17.85	.10	Chgo. 16
4	20.40	.10	16
5	25.50	.10	Chgo. 16
6	30.60	.10	16
8	40.80	.10	Chgo. 16
12	61.20	.10	Chgo. 16
1-3/4x			
2½	14.87	.10	16
3	17.85	.10	16
4	23.80	.10	Chgo. 16
6	35.70	.10	Chgo. 16
2x			
2½	17.00	.10	16
3	20.40	.10	16
4	27.20	.10	16
6	40.80	.10	16
8	54.40	.10	Chgo. 16
12	81.60	.10	Chgo. 16
2-1/2x			
3	25.50	.20	Chgo. 16
4	34.00	.20	16
5	42.50	.20	16
6	51.00	.20	16
3x			
4	40.80	.20	16
5	51.00	.20	16
6	61.20	.20	16

Heat Treat. Alloys 117
Tool Steel 123
Sheets 12[illegible]
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbi[illegible] 203
[illegible]eldin Rod 21[illegible]
Bol[illegible] Rei[illegible] 22[illegible]
Data 243
C[illegible]

CHROME MOLYBDENUM STEEL



HOT ROLLED ROUNDS



S.A.E. 4150—ANNEALED

A.S.T.M. fine (5-8) grain size

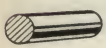
Identification Colors: Yellow and Aluminum

Hot Rolled—Annealed—Machine Straightened

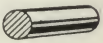
Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
½	0.67	.20	16
⅝	1.04	.10	Chgo. 16
¾	1.50	Base	16
⅞	2.04	"	16
1	2.67	"	16
1⅛	3.38	"	16
1¼	4.17	"	16
1⅜	5.05	"	16
1½	6.01	"	16
1⅝	7.05	.10	16
1¾	8.18	.10	16
1⅞	9.39	.10	16
2	10.68	.10	16
2⅛	12.06	.15	16
2¼	13.52	.15	16
2⅜	15.06	.15	16
2½	16.69	.15	16
2⅝	18.40	.20	16
2¾	20.20	.20	16
2⅞	22.07	.20	Buff. 16
3	24.03	.20	16
3⅛	26.08	.25	Bost. 16
3¼	28.21	.25	16
3⅜	30.42	.25	Bost. 16
3½	32.71	.25	16
3⅝	35.09	.25	Bost. 16
3¾	37.55	.25	16
3⅞	40.10	.25	Bost. 16
4	42.73	.25	16
4¼	48.23	.25	16
4½	54.08	.25	16
4¾	60.25	.35	16
5	66.76	.35	16
5¼	73.60	.45	16
5½	80.78	.45	16
5¾	88.29	.55	16
6	96.13	.55	16
6¼	104.31	.65	Bost. 16
6½	112.82	.65	16
7	130.85	.75	16
7½	150.21	.75	Chgo. 16

This stock includes bars 14 to 16 ft. which will be furnished occasionally unless you indicate that all 16 ft. bars are desired.

SILICO MANGANESE STEEL



HOT ROLLED ROUNDS



S.A.E. 9255—ANNEALED

Shipped from our Chicago Plant

Identification Colors: Pink and White

Hot Rolled—Annealed—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
¾	1.50	Base	16
⅞	2.04	"	16
1	2.67	"	16
1⅛	3.38	"	16
1¼	4.17	"	16
1⅜	5.05	"	16
1½	6.01	"	16
1⅝	7.05	.10	16
1¾	8.18	.10	16
1⅞	9.39	.10	16
2	10.68	.10	16
2⅛	12.06	.15	16
2¼	13.52	.15	16
2⅜	15.06	.15	16
2½	16.69	.15	16
2⅝	18.40	.20	16
2¾	20.20	.20	16
2⅞	22.07	.20	16
3	24.03	.20	16

CHROME NICKEL MOLYBDENUM STEEL

HOT ROLLED ROUNDS
S.A.E. X4340—ANNEALED

A.S.T.M. fine (5-8) grain size

Shipped from our Chicago Plant

Identification Colors: Purple and Aluminum

Hot Rolled—Annealed—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
1	2.67	Base	16
1⅛	3.38	"	16
1¼	4.17	"	16
1⅜	5.05	"	16
1½	6.01	"	16
1⅝	7.05	.10	16
1¾	8.18	.10	16
1⅞	9.39	.10	16
2	10.68	.10	16
2⅛	12.06	.15	16
2¼	13.52	.15	16
2⅜	15.06	.15	16
2½	16.69	.15	16
2⅝	18.40	.20	16
2¾	20.20	.20	16
3	24.03	.20	16
3¼	28.21	.25	16
3½	32.71	.25	16
3¾	37.55	.25	16
4	42.73	.25	16
4¼	48.23	.25	16
4½	54.08	.25	16
4¾	60.25	.35	16
5	66.76	.35	16
5½	80.78	.45	16
6	96.13	.55	16

HOT ROLLED ROUNDS
S.A.E. X4340—ANNEALED

An Electric Furnace Product. Conforms to U. S. Air Corps Specification 11062 D-Mar. 3, 1939

A.S.T.M. fine (5-8) grain size

Shipped from our Cleveland Plant

Identification Colors: Aluminum and Brown

Hot Rolled—Annealed—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
1	2.67	Base	16
1⅛	3.38	"	16
1¼	4.17	"	16
1⅜	5.05	"	16
1½	6.01	"	16
1⅝	7.05	.10	16
1¾	8.18	.10	16
1⅞	9.39	.10	16
2	10.68	.10	16
2¼	13.52	.15	16
2½	16.69	.15	16
2¾	20.20	.20	16
3	24.03	.20	16
3¼	28.21	.25	16
3½	32.71	.25	16
3¾	37.55	.25	16
4	42.73	.25	16

For cutting extras and S.A.E. specifications, see back of book.

Heat Treat. Alloys 117
Tool Steel 123
Sheets 13[illegible]
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbi[illegible] 203
[illegible]ding Rod 21[illegible]
Bolt Rei[illegible] 22
Data 243
C[illegible]

H. T. M. ALLOY STEEL

Shipped from our Chicago Plant

Identification Colors: Orange and Purple

This is a new chrome nickel molybdenum alloy steel of very special composition. It is a deep hardening steel and possesses the unique characteristic of being machinable with hardness ranging up to 450 Brinell. It is very useful for parts which cannot be heat treated after machining but which must be hard for resistance to wear, etc.

Heat Treatment

Heat slowly and thoroughly. Small sections may be air cooled; larger sections may be air or oil cooled, depending on results desired.

Typical Physicals on 1" Round Samples

Air Cooled from 1650° F.

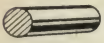
Draw	T. S.	Y. S.	Elg. in 2"	Red.	Brinell
700	241,000	208,000	11.5	37.0	477
900	205,000	184,000	13.5	42.0	415
1100	158,000	137,000	14.0	53.0	321

Oil quenched from 1550° F.

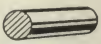
700	237,000	207,000	11.5	41.0	461
900	205,000	194,000	13.0	44.0	415
1100	158,000	142,000	18.0	58.0	321

Note that physicals are almost the same for air or oil quenching. Warpage and danger of cracking are reduced by using air cooling. Where air is used the hardness will be practically the same in the center as at the surface. We suggest using a draw temperature not lower than 650° F. nor higher than 1250° F., as this will produce the maximum toughness for the hardness developed.

Uses—Gears, worms, cams, rollers, spindles, shafts, forming rolls and all parts requiring hardness and high physicals and wherever a high hardness machinable steel is needed.



ROUNDS



Hot Rolled—Annealed—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
1	2.67	Base	20	2 5/8	18.40	.20	20
1 1/8	3.38	"	20	2 3/4	20.20	.20	20
1 1/4	4.17	"	20	2 7/8	22.07	.20	20
1 3/8	5.05	"	20	3	24.03	.20	20
1 1/2	6.01	"	20	3 1/8	26.08	.25	20
1 5/8	7.05	.10	20	3 1/4	28.21	.25	20
1 3/4	8.18	.10	20	3 3/8	30.42	.25	20
1 7/8	9.39	.10	20	3 1/2	32.71	.25	20
2	10.68	.10	20	3 5/8	35.09	.25	20
2 1/8	12.06	.15	20	3 3/4	37.55	.25	20
2 1/4	13.52	.15	20	4	42.73	.25	20
2 3/8	15.06	.15	20	4 1/4	48.23	.25	20
2 1/2	16.69	.15	20	4 1/2	54.08	.25	20

This stock includes bars 16 to 20 ft. which will be furnished occasionally unless you specify all 20 ft. bars.

NICKEL MOLYBDENUM STEEL

HOT ROLLED ROUNDS
S.A.E. 4615—4620—NOT ANNEALED

(Carbon .15 to .20)

A.S.T.M. fine (5-8) grain size

Identification Colors: Yellow and White

Hot Rolled—Machine Straightened

Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.	Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.
1/2	.67	.20	16	3 1/4	28.21	.25	16
9/16	.845	.15	N.Y. 16	3 3/8	30.42	.25	Bost. 16
5/8	1.04	.10	16	3 1/2	32.71	.25	16
3/4	1.50	Base	16	3 5/8	35.09	.25	16
7/8	2.04	"	16	3 3/4	37.55	.25	16
1	2.67	"	16	3 7/8	40.10	.25	16
1 1/8	3.38	"	16	4	42.73	.25	16
1 1/4	4.17	"	16	4 1/4	48.23	.25	16
1 3/8	5.05	"	16	4 3/8	51.11	.25	16
1 1/2	6.01	"	16	4 1/2	54.08	.25	16
1 5/8	7.05	.10	16	4 3/4	60.25	.35	16
1 3/4	8.18	.10	16	5	66.76	.35	16
1 7/8	9.39	.10	16	5 1/4	73.60	.45	16
2	10.68	.10	16	5 1/2	80.78	.45	16
2 1/8	12.06	.15	16	5 3/4	88.29	.55	16
2 1/4	13.52	.15	16	6	96.13	.55	16
2 3/8	15.06	.15	16	6 1/4	104.31	.65	16
2 1/2	16.69	.15	16	6 1/2	112.82	.65	16
2 5/8	18.40	.20	16	6 3/4	121.67	.75	16
2 3/4	20.20	.20	16	7	130.85	.75	16
2 7/8	22.07	.20	16	7 1/2	150.21	.75	16
3	24.03	.20	16	8	170.90	1.10	16
3 1/8	26.08	.25	16				

This stock includes bars 14 to 16 ft. which will be furnished occasionally unless you indicate all 16 ft. bars are desired.

COLD FINISHED ROUNDS
S.A.E. 4615—4620—NOT ANNEALED

A.S.T.M. fine (5-8) grain size

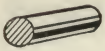
Identification Colors: Yellow and White

Cold Finished—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
1/4	.167	1.25	12	1 9/16	6.52	.45	12
5/16	.261	1.00	12	1 5/8	7.05	.45	12
3/8	.376	.90	12	1 3/4	8.18	.45	12
7/16	.511	.70	12	1 7/8	9.39	.45	12
1/2	.668	.70	12	2	10.68	.45	12
9/16	.845	.70	12	2 1/8	12.06	.45	12
5/8	1.04	.55	12	2 1/4	13.52	.45	12
11/16	1.26	.45	12	2 3/8	15.06	.45	12
3/4	1.50	.45	12	2 1/2	16.69	.45	12
13/16	1.76	.40	12	2 5/8	18.40	.50	12
7/8	2.04	.40	12	2 3/4	20.19	.50	12
15/16	2.34	.40	12	2 7/8	22.07	.50	12
1	2.67	.40	12	2 15/16	23.06	.70	12
1 1/16	3.01	.40	12	3	24.03	.70	12
1 1/8	3.38	.40	12	3 1/8	26.08	.75	Chgo. 12
1 3/16	3.77	.40	12	3 1/4	28.20	.75	Chgo. 12
1 1/4	4.17	.40	12	3 3/8	30.42	.75	Chgo. 12
1 5/16	4.60	.40	12	3 1/2	32.71	.85	Chgo. 12
1 3/8	5.05	.40	12	3 5/8	35.09	.90	Chgo. 12
1 7/16	5.52	.40	12	3 3/4	37.55	.90	Chgo. 12
1 1/2	6.01	.40	12	4	42.73	1.00	Chgo. 12

Heat Treat. Alloys 117
Tool Steel 123
Sheets 12[illegible]
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbi[illegible] 203
[illegible]ain Rod 21[illegible]
Bolt Reit 22
Data 243
C[illegible]

NICKEL MOLYBDENUM STEEL



HOT ROLLED ROUNDS
S.A.E. 4640—ANNEALED

Electric Furnace Quality

A.S.T.M. fine (5-8) grain size

Shipped from our Chicago Plant

Identification Colors: Blue and Brown

Hot Rolled—Annealed—Machine Straightened

Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.	Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.
1	2.67	Base	16	2 3/8	15.06	.15	16
1 1/8	3.38	"	16	2 1/2	16.69	.15	16
1 1/4	4.17	"	16	2 3/4	20.20	.20	16
1 3/8	5.05	"	16	3	24.03	.20	16
1 1/2	6.01	"	16	3 1/4	28.21	.25	16
1 5/8	7.05	.10	16	3 1/2	32.71	.25	16
1 3/4	8.18	.10	16	3 3/4	37.55	.25	16
1 7/8	9.39	.10	16	4	42.73	.25	16
2	10.68	.10	16	4 1/2	54.08	.25	16
2 1/8	12.06	.15	16	5	66.76	.35	16
2 1/4	13.52	.15	16				

NICKEL MOLYBDENUM STEEL

HOT ROLLED ROUNDS
S.A.E. 4815—NOT ANNEALED

A.S.T.M. fine (5-8) grain size

Shipped from our Chicago Plant

Identification Colors: Green and Brown

Hot Rolled—Machine Straightened

Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.	Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
1/2	.67	.20	16	2 3/8	15.06	.15	16
5/8	1.04	.10	16	2 1/2	16.69	.15	16
3/4	1.50	Base	16	2 5/8	18.40	.20	16
7/8	2.04	"	16	2 3/4	20.20	.20	16
1	2.67	"	16	3	24.03	.20	16
1 1/8	3.38	"	16	3 1/4	28.21	.25	16
1 1/4	4.17	"	16	3 1/2	32.71	.25	16
1 3/8	5.05	"	16	3 3/4	37.55	.25	16
1 1/2	6.01	"	16	4	42.73	.25	16
1 5/8	7.05	.10	16	4 1/4	48.23	.25	16
1 3/4	8.18	.10	16	4 1/2	54.08	.25	16
1 7/8	9.39	.10	16	4 3/4	60.25	.35	16
2	10.68	.10	16	5	66.76	.35	16
2 1/8	12.06	.15	16	5 1/2	80.78	.45	16
2 1/4	13.52	.15	16	6	96.13	.55	16

CHROME VANADIUM STEEL

HOT ROLLED FLATS
S.A.E. 6145—6150—ANNEALED

A.S.T.M. fine (5-8) grain size

Shipped from our Detroit and Cleveland Plants

Identification Colors: Yellow and Pink

Hot Rolled—Annealed—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Stock Lgths. Ft.
¼ x ¾	0.638	16
1	0.850	16
1½	1.28	16
2	1.70	16
⅜ x ¾	0.956	16
1	1.28	16
1¼	1.59	16
1½	1.91	16
2	2.55	16
½ x 1	1.70	16
1¼	2.13	16
1½	2.55	16
2	3.40	16
2½	4.25	16
3	5.10	16
⅝ x ¾	1.59	16
1	2.13	16
1¼	2.66	16
1½	3.19	16
2	4.25	16
¾ x 1	2.55	16
1¼	3.19	16
1½	3.83	16
2	5.10	16
2¼	5.74	16
2½	6.38	16
3	7.65	16
4	10.20	16
1 x 1¼	4.25	16
1½	5.10	16
1¾	5.95	16
2	6.80	16
2½	8.50	16
1 x 3	10.20	16
3½	11.90	16
4	13.60	16
5	17.00	16
6	20.40	16
1¼ x 1½	6.38	16
2	8.50	16
2½	10.63	16
3	12.75	16
3½	14.88	16
4	17.00	16
5	21.25	16
6	25.50	16
1½ x 2	10.20	16
2½	12.75	16
3	15.30	16
3½	17.85	16
4	20.40	16
5	25.50	16
6	30.60	16
1¾ x 2½	14.88	16
3	17.85	16
2 x 2½	17.00	16
3	20.40	16
4	27.20	16
5	34.00	16
6	40.80	16
2½ x 3	25.50	16
3½	29.75	16
4	34.00	16
5	42.50	16
3 x 4	40.80	16
5	51.00	16
6	61.20	16

HOT ROLLED SQUARES
S.A.E. 6145—6150—ANNEALED

Shipped from our Detroit and Cleveland Plants

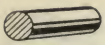
Identification Colors: Yellow and Pink

Hot Rolled—Annealed—Machine Straightened

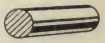
Size in Inches	Weight Per Ft. Lbs.	Stock Lgths. Ft.
⅜	.478	16
½	.850	16
⅝	1.328	16
¾	1.913	16
1	3.400	16
1¼	5.314	16
1½	7.650	16
1¾	10.414	16
2	13.600	16
2½	21.250	16
3	30.600	16
3½	41.650	16
4	54.400	16

Heat Treat. Alloys 117
Tool Steel 123
Sheets 13
Spec. Sheets 157
Stainless 167
Tubing 189
Bir. Tube Babbi 203
Weldin Rod 21
Bolt Rei 22
Data 243
C

CHROME VANADIUM STEEL



HOT ROLLED ROUNDS
S.A.E. 6145—6150—ANNEALED



A.S.T.M. fine (5-8) grain size
Identification Colors: Yellow and Pink

Hot Rolled—Annealed—Machine Straightened

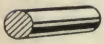
Size in Inches	Weight Per Ft. Lbs.	Net Size Extra	Stock Lgths. Ft.
1/4	0.167	1.00	16
5/16	0.261	.70	16
3/8	0.376	.40	16
1/2	0.668	.20	16
5/8	1.04	.10	16
3/4	1.50	Base	16
7/8	2.04	"	16
15/16	2.35	"	16
1	2.67	"	16
1 1/8	3.38	"	16
1 1/4	4.17	"	16
1 3/8	5.05	"	16
1 1/2	6.01	"	16
1 5/8	7.05	.10	16
1 3/4	8.18	.10	16
1 7/8	9.39	.10	16
2	10.68	.10	16
2 1/8	12.06	.15	16
2 1/4	13.52	.15	16
2 3/8	15.06	.15	16
2 1/2	16.69	.15	16
2 5/8	18.40	.20	16
2 3/4	20.20	.20	16
2 7/8	22.07	.20	Chgo. 16
3	24.03	.20	16
3 1/8	26.08	.25	16
3 1/4	28.21	.25	16
3 3/8	30.42	.25	Chgo. 16
3 1/2	32.71	.25	16
3 5/8	35.09	.25	Chgo. 16
3 3/4	37.55	.25	16
4	42.75	.25	16
4 1/4	48.23	.25	16
4 1/2	54.08	.25	16
4 3/4	60.25	.35	16
5	66.76	.35	16
5 1/4	73.60	.45	16
5 1/2	80.78	.45	16
5 3/4	88.29	.55	16
6	96.13	.55	16
6 1/4	104.31	.65	16
6 1/2	112.82	.65	Bost. 16
6 3/4	121.67	.75	16
7	130.85	.75	16
7 1/2	150.21	.75	16
8	170.90	1.10	16

SILICO MANGANESE STEEL

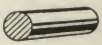
HOT ROLLED ROUNDS—S.A.E. 9255

See Page 108

CHROME BEARING STEEL



HOT ROLLED ROUNDS
S.A.E. 52100—ANNEALED



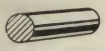
Identification Colors: Red, White and Blue

A spheroidized annealed, chrome bearing steel of deep etching quality.

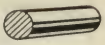
Hot Rolled—Spheroidized—Annealed

Size in Inches	Weight Per Ft. Lbs.	Net Size Extra	Stock Lgths. Feet
1/2	.668	.20	Chgo. 16
5/8	1.04	.10	16
3/4	1.50	Base	16
7/8	2.04	"	16
1	2.67	"	16
1 1/8	3.38	"	Chgo. 16
1 1/4	4.17	"	16
1 3/8	5.05	"	16
1 1/2	6.01	"	16
1 5/8	7.05	.10	16
1 3/4	8.18	.10	16
1 7/8	9.39	.10	Chgo. 16
2	10.68	.10	16
2 1/8	12.06	.15	Clev. 16
2 1/4	13.52	.15	16
2 3/8	15.06	.15	16
2 1/2	16.69	.15	16
2 5/8	18.40	.20	Chgo. 16
2 3/4	20.20	.20	Clev. 16
2 7/8	22.07	.20	Chgo. 16
3	24.03	.20	Chgo. 16
3 1/4	28.21	.25	Chgo. 16
3 1/2	32.71	.25	Chgo. 16
3 3/4	37.55	.25	Clev. 16
4	42.73	.25	Chgo. 16
4 1/4	48.23	.25	Clev. 16
4 1/2	54.08	.25	Chgo. 16
4 3/4	60.25	.35	Chgo. 16
5	66.76	.35	Chgo. 16
5 1/2	80.78	.45	Clev. 16
6	96.13	.55	Chgo. 16

RYTENSE A.A. MACHINERY STEEL



HOT ROLLED ROUNDS



For Strength—Free Cutting—Forging—Heat Treating

Identification Colors: White and Gold

A special analysis machinery steel that machines about 80% as freely as Bessemer Screw Stock. The cutting tool leaves a smooth clean finish.

Typical applications include motor and generator shafts, axles, spindles, gears, pump shafts, tie rods, studs, bolts, etc. Write for special bulletin.

Typical minimum physical properties—Tensile strength 90,000 lbs. per square inch; Yield Point 60,000 lbs. per square inch; Elongation in 2", 18%; Reduction of Area 45%; Brinell hardness 207.

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
3/8	0.376	.40	20
7/16	0.511	.30	Bost.
1/2	0.668	.20	20
9/16	0.845	.15	20
5/8	1.04	.10	20
11/16	1.26	.10	Bost.
3/4	1.50	Base	20
13/16	1.76	"	Bost.
7/8	2.04	"	20
15/16	2.35	"	Bost.
1	2.67	"	20
1 1/16	3.01	"	20
1 1/8	3.38	"	20
1 3/16	3.77	"	20
1 1/4	4.17	"	20
1 5/16	4.60	"	20
1 3/8	5.05	"	20
1 7/16	5.52	"	20
1 1/2	6.01	"	20
1 9/16	6.52	.10	Bost.
1 5/8	7.05	.10	20
1 11/16	7.60	.10	Bost.
1 3/4	8.18	.10	20
1 13/16	8.79	.10	Bost.
1 7/8	9.39	.10	20
1 15/16	10.02	.10	Bost.
2	10.68	.10	20
2 1/8	12.06	.15	20
2 1/4	13.52	.15	20
2 3/8	15.06	.15	20
2 7/16	15.87	.15	Bost.
2 1/2	16.69	.15	20
2 5/8	18.40	.20	20
2 3/4	20.20	.20	20
2 7/8	22.07	.20	20
3	24.03	.20	20
3 1/8	26.08	.25	20
3 1/4	28.21	.25	20
3 3/8	30.42	.25	20
3 1/2	32.71	.25	20
3 5/8	35.09	.25	20
3 3/4	37.55	.25	20
3 7/8	40.10	.25	20
4	42.73	.25	20
4 1/8	45.44	.25	20
4 1/4	48.23	.25	20
4 3/8	51.11	.25	20
4 1/2	54.08	.25	20
4 5/8	57.12	.35	20
4 3/4	60.25	.35	20
5	66.76	.35	20
5 1/4	73.60	.45	20
5 1/2	80.78	.45	20
5 3/4	88.29	.55	20
6	96.13	.55	20
6 1/4	104.31	.65	20
6 1/2	112.82	.65	20
6 3/4	121.67	.75	20
7	130.85	.75	20
7 1/4	140.36	.75	20
7 1/2	150.21	.75	20
7 3/4	160.39	.85	20
8	170.90	1.10	20

For cutting extras and S.A.E. specifications, see back of book.

Heat Treat. Alloys 117
Tool Steel 123
Sheets 12
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbi 203
Weldin Rod 21
Bolt Rei 22
Data 243

RYCASE STEEL—HOT ROLLED

(S.A.E. X1314)

Case Hardening—Free Cutting—Forging

Identification Color: Gold

A low carbon high manganese case carburizing steel having a machinability rating within 5% of Bessemer Screw Stock. When substituted for ordinary O. H. case hardening steels, it increases production 30% to 40%.

When heat treated, Rycase possesses physical properties surpassed only by the more costly alloy steels. In normal state, without heat treatment, it provides a better steel due to refinements secured by additional manganese and special method of manufacture.

Rycase fulfills in every way the demand for a highly refined case carburizing steel without sacrificing machinability. Case is hard, deep, and uniform. Core is tough and ductile without being brittle. Rycase will withstand bending, broaching, nibbing and other heavy deforming operations without cracking.

Rycase can be heat treated according to the general practice for case carburizing steels, and will respond satisfactorily to heat treating, carburizing and cyaniding.

Typical minimum physical properties—Tensile Strength 71,000 lbs. per square inch; Yield Point 41,000 lbs. per square inch; Elongation in 2", 30%; Reduction of Area 58%; Brinell hardness 135.

HOT ROLLED ROUNDS

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
1/4	0.167	1.00	Bost. 20	2 3/4	20.20	.20	20
3/8	0.376	.40	20	2 7/8	22.07	.20	20
7/16	0.511	.30	20	3	24.03	.20	20
1/2	0.668	.20	20	3 1/8	26.08	.25	20
9/16	0.845	.15	Bost. 20	3 1/4	28.21	.25	20
5/8	1.04	.10	20	3 3/8	30.42	.25	20
11/16	1.26	.10	20	3 1/2	32.71	.25	20
3/4	1.50	Base	20	3 5/8	35.09	.25	20
13/16	1.76	"	20	3 3/4	37.55	.25	20
7/8	2.04	"	20	3 7/8	40.10	.25	Bost. 20
15/16	2.34	"	Bost. 20	4	42.73	.25	20
1	2.67	"	20	4 1/8	45.44	.25	20
1 1/16	3.01	"	Bost. 20	4 1/4	48.23	.25	20
1 1/8	3.38	"	20	4 3/8	51.11	.25	20
1 3/16	3.76	"	Bost. 20	4 1/2	54.08	.25	20
1 1/4	4.17	"	20	4 5/8	57.12	.35	Bost. 20
1 5/16	4.60	"	20	4 3/4	60.25	.35	20
1 3/8	5.05	"	20	5	66.76	.35	20
1 7/16	5.52	"	Bost. 20	5 1/4	73.60	.45	20
1 1/2	6.01	"	20	5 1/2	80.78	.45	20
1 9/16	6.52	.10	Bost. 20	5 3/4	88.29	.55	20
1 5/8	7.05	.10	20	6	96.13	.55	20
1 3/4	8.18	.10	20	6 1/4	104.31	.65	20
1 7/8	9.39	.10	20	6 1/2	112.82	.65	20
2	10.68	.10	20	6 3/4	121.67	.75	20
2 1/8	12.06	.15	20	7	130.85	.75	20
2 1/4	13.52	.15	20	7 1/4	140.36	.75	20
2 3/8	15.06	.15	20	7 1/2	150.21	.75	20
2 1/2	16.69	.15	20	7 3/4	160.80	.85	Bost. 20
2 5/8	18.40	.20	20	8	170.90	1.10	20

COLD FINISHED ROUNDS

Cold Finished Rycase is also carried in stock — See sizes listed in Cold Finished Steel Section.

RYCROME
HEAT TREATED ALLOY STEEL

Identification Colors: Black and White

A special analysis chrome-molybdenum alloy steel carefully heat treated to produce a uniform dependable product for parts subjected to extreme stress. Particularly suited to high temperature and high pressure applications. Though a hard steel, Rycrome takes a very good finish and heavy cuts can be taken without excessive wear on the tools.

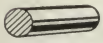
Applications include heavy duty drive and crank shafts, roll mandrels, pinions, heavy duty studs, bolts, pins, etc. Wrtie for bulletin.

RYCROME—HOT ROLLED

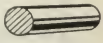
Typical Minimum Physical Properties

Size	Tensile Strength, Lbs. Per Sq. Ft.	Yield Point Lbs. Per Sq. In.	Elong. in 2 in.	Red. of Area
Under 2½" Rd.	125,000	105,000	16%	50%
2½" to under 4" Rd.	115,000	95,000	16%	45%
4" and over:	110,000	85,000	16%	45%

Brinell hardness maximum 321.



ROUNDS

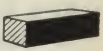


A.S.T.M. fine (5-8) grain size

Hot Rolled—Heat Treated—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
⅜	.376	.40	16	2¾	20.20	.20	16,20
½	.668	.20	16	2⅞	22.07	.20	16,20
9/16	.845	.15	16	3	24.03	.20	16,20
⅝	1.04	.10	16	3⅛	26.08	.25	16,20
¾	1.50	Base	16	3¼	28.21	.25	16,20
⅞	2.04	"	16	3⅜	30.42	.25	16,20
1	2.67	"	16	3½	32.71	.25	16,20
1⅛	3.38	"	16	3⅝	35.09	.25	16,20
1¼	4.17	"	16	3¾	37.55	.25	16,20
1⅜	5.05	"	16	3⅞	40.13	.25	16,20
1½	6.01	"	16	4	42.73	.25	16,20
1⅝	7.05	.10	16	4⅛	45.44	.25	16,20
1¾	8.18	.10	16	4¼	48.23	.25	16,20
1⅞	9.39	.10	16	4½	54.08	.25	16,20
2	10.68	.10	16	4⅝	57.12	.35	16,20
2⅛	12.06	.15	16	4¾	60.25	.35	16,20
2¼	13.52	.15	16	5	66.76	.35	16,20
2⅜	15.06	.15	16	5¼	73.60	.45	Chgo. 16
2½	16.69	.15	16,20	5½	80.78	.45	Chgo. 16
2⅝	18.40	.20	16,20				

SQUARES—RYCROME



A.S.T.M. fine (5-8) grain size

Hot Rolled—Heat Treated—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
1½	7.65	Base	16	2¾	25.71	.20	16,20
1⅝	8.98	.10	16	3	30.60	.20	16,20
1¾	10.41	.10	16	3½	41.65	.25	16,20
2	13.60	.10	16	4	54.40	.25	16,20
2¼	17.21	.15	Chgo. 16	4½	69.85	.25	16,20
2½	21.25	.15	16,20				

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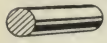
RYCROME
HEAT TREATED ALLOY STEEL
RYCROME—COLD FINISHED

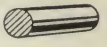
Identification Colors: Black and White

Cold Finished Rycrome answers to the same general physical description as Hot Rolled Rycrome except that the ductility as measured by elongation and reduction of area may be slightly lower, owing to the effect of cold drawing.

ROUNDS



A.S.T.M. fine (5-8) grain size



All sizes 2 15/16" and larger are Turned and Polished.

Cold Finished—Heat Treated—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
1/4	.167	1.25	Chgo. 12
5/16	.261	1.00	Chgo. 12
3/8	.376	.90	12
7/16	.511	.70	12
1/2	.668	.70	12
9/16	.845	.70	12
5/8	1.04	.55	12
11/16	1.26	.45	12
3/4	1.50	.45	12
13/16	1.76	.40	12
7/8	2.04	.40	12
15/16	2.34	.40	12
1	2.67	.40	12
1 1/16	3.01	.40	12
1 1/8	3.38	.40	12
1 3/16	3.77	.40	12
1 1/4	4.17	.40	12
1 5/16	4.60	.40	12
1 3/8	5.05	.40	12
1 7/16	5.52	.40	12
1 1/2	6.01	.40	12
1 9/16	6.52	.45	Chgo. 12
1 5/8	7.05	.45	12
1 11/16	7.60	.45	12
1 3/4	8.18	.45	12
1 13/16	8.77	.45	12
1 7/8	9.39	.45	12
1 15/16	10.02	.45	12
2	10.68	.45	12
2 1/16	11.36	.45	12
2 1/8	12.06	.45	12
2 3/16	12.78	.45	Chgo. 12
2 1/4	13.52	.45	12
2 5/16	14.28	.45	Chgo. 12
2 3/8	15.06	.45	12
2 7/16	15.87	.45	12
2 1/2	16.69	.45	12
2 5/8	18.40	.50	12
2 11/16	19.29	.50	12
2 3/4	20.19	.50	12
2 13/16	21.12	.50	12
2 7/8	22.07	.50	Chgo. 12
2 15/16	23.06	.70	12
3	24.03	.70	12
3 1/16	25.04	.70	Chgo. 12
3 1/8	26.08	.75	Chgo. 12
3 3/16	27.13	.75	12
3 1/4	28.20	.75	12
3 5/16	29.30	.75	Chgo. 12
3 3/8	30.42	.75	12
3 7/16	31.55	.85	12
3 1/2	32.71	.85	12
3 5/8	35.09	.90	Chgo. 12
3 11/16	36.31	.90	Chgo. 12
3 3/4	37.55	.90	Chgo. 12
3 7/8	40.13	.90	Chgo. 12
3 15/16	41.40	1.00	12
4	42.73	1.00	12
4 1/8	45.44	1.10	Chgo. 12
4 1/4	48.23	1.10	Chgo. 12
4 3/8	51.11	1.10	Chgo. 12
4 1/2	54.08	1.20	Chgo. 12

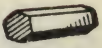
SQUARES—RYCROME

A.S.T.M. fine (5-8) grain size

Cold Finished—Heat Treated—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
3/4	1.92	1.05	Chgo. 12
7/8	2.60	1.05	Chgo. 12
1	3.400	1.05	12
1 1/8	4.303	1.05	12
1 1/4	5.314	1.05	12
1 3/8	6.43	1.25	Chgo. 12
1 1/2	7.65	1.25	Chgo. 12
1 5/8	8.98	1.25	Chgo. 12
1 3/4	10.41	1.25	Chgo. 12
1 7/8	11.96	1.25	Chgo. 12
2	13.60	1.25	Chgo. 12
2 1/8	15.36	2.00	Chgo. 12
2 1/4	17.21	2.00	Chgo. 12
2 3/8	19.19	2.00	Chgo. 12
2 1/2	21.25	2.00	Chgo. 12
2 3/4	25.71	2.00	Chgo. 12
3	30.60	2.00	Chgo. 12

RYCROME
HEAT TREATED ALLOY STEEL
COLD FINISHED HEXAGONS



Identification Colors: Black and White

Cold Finished—Heat Treated—Machine Straightened

Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.	Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.
7/16	.564	1.25	12	1 1/4	4.601	.45	12
1/2	.737	.90	12	1 5/16	5.070	.50	12
9/16	.932	.80	12	1 3/8	5.567	.50	Chgo. 12
5/8	1.150	.70	12	1 7/16	6.090	.50	Chgo. 12
11/16	1.390	.60	12	1 1/2	6.625	.60	12
3/4	1.658	.60	12	1 5/8	7.775	.60	12
13/16	1.944	.60	12	1 3/4	9.018	.60	12
7/8	2.256	.55	12	1 7/8	10.355	.60	Chgo. 12
15/16	2.590	.55	12	2	11.780	.75	12
1	2.944	.50	12	2 1/4	14.911	1.00	Chgo. 12
1 1/16	3.320	.50	12	2 1/2	18.403	1.00	Chgo. 12
1 1/8	3.727	.45	12	2 3/4	22.27	1.00	12
1 3/16	4.152	.45	Chgo. 12	3	26.500	1.50	Chgo. 12

NIKROME HEAT TREATED ALLOY STEEL

A.S.T.M. fine (5-8) grain size

Identification Colors: Red and Purple

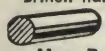
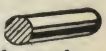
Nikrome is a high quality heat treated alloy steel. It is used for parts that are subject to extreme stress such as: heavy duty drive and crank shafts, roll mandrels, pinions, heavy duty studs, bolts, pins, etc.

Nikrome is a finished, heat treated product ready for immediate use. While hard, it is not too hard for regular commercial machining. Write for bulletin.

Typical Minimum Physical Properties

Size	Tensile Strength, Lbs. per Sq. In.	Yield Point Lbs. per Sq. In.	Elong. in 2"	Red. of Area
Under 2 1/2" Rd.	125,000	105,000	16%	50%
2 1/2" to under 4" Rd.	115,000	95,000	16%	45%
4" and over:	110,000	85,000	16%	45%

Brinell hardness maximum 321.

ROUNDS

Hot Rolled—Heat Treated—Machine Straightened

Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.	Size in Inches	Weight per Ft. Lbs.	Net Size Extra	Stock Lgths., Ft.
5/8	1.04	.10	Chgo. 20	3 1/8	26.08	.25	Chgo. 20
3/4	1.50	Base	20	3 1/4	28.21	.25	20
7/8	2.04	"	20	3 3/8	30.42	.25	Chgo. 20
1	2.67	"	20	3 1/2	32.71	.25	20
1 1/8	3.38	"	20	3 5/8	35.09	.25	Chgo. 20
1 1/4	4.17	"	20	3 3/4	37.55	.25	20
1 3/8	5.05	"	20	4	42.73	.25	20
1 1/2	6.01	"	20	4 1/4	48.23	.25	20
1 5/8	7.05	.10	20	4 1/2	54.08	.25	20
1 3/4	8.18	.10	20	4 3/4	60.25	.35	20
1 7/8	9.39	.10	20	5	66.76	.35	20
2	10.68	.10	20	5 1/4	73.60	.45	Chgo. 20
2 1/8	12.06	.15	Chgo. 20	5 1/2	80.78	.45	Chgo. 20
2 1/4	13.52	.15	20	5 3/4	88.29	.55	Chgo. 20
2 3/8	15.06	.15	Chgo. 20	6	96.13	.55	Chgo. 20
2 1/2	16.69	.15	20	6 1/4	104.31	.65	Chgo. 20
2 5/8	18.40	.20	20	6 1/2	112.82	.65	Chgo. 20
2 3/4	20.20	.20	20	6 3/4	121.67	.75	Chgo. 20
2 7/8	22.07	.20	Chgo. 20	7	130.85	.75	Chgo. 20
3	24.03	.20	20	7 1/2	150.21	.75	Chgo. 20

Tool Steel 123
Sheets 12[illegible]
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbi[illegible] 203
[illegible]ain[illegible] Rod 213
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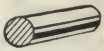
Data 243
C[illegible]

NIKROME "M" HEAT TREATED HOT ROLLED ALLOY STEEL

ROUNDS



For Large Heavy Duty Applications

Identification Colors: Green and Aluminum

When standard alloy bars over about 4½" in diameter are subjected to a regular quench and draw heat treatment, the results are usually unsatisfactory. Ordinarily the treatment penetration is not very deep and little or no change is made in the physical properties of the center portion of the bar. If an attempt is made to increase the center physicals, the outside surface becomes so hard and difficult to machine that bars are subject to considerable warpage during the machining operation.

Nikrome "M" is a special analysis steel subjected to a special form of heat treatment that develops practically uniform physical properties over the entire cross-section of the bar. Because of the severe demands made on large sections, Nikrome "M" has highest physicals commensurate with a high degree of ductility and toughness. Special precautions have been taken to reduce warpage to a minimum. We are confident that Nikrome "M" will solve the problem of obtaining a steel suitable for large shafts, pins, axles, etc.

Typical minimum physical properties—Tensile Strength 110,000 lbs. per square inch; Yield Point 90,000 lbs. per square inch; Elongation in 2", 16%; Reduction of Area 47%; Brinell hardness 240-265.

Hot Rolled—Heat Treated—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
4½	54.08	.25	16,20	6¼	104.31	.65	16,20
4¾	60.25	.35	16,20	6½	112.82	.65	16,20
5	66.76	.35	16,20	6¾	121.67	.75	16,20
5¼	73.60	.45	16,20	7	130.85	.75	16,20
5½	80.78	.45	16,20	7¼	140.36	.75	16,20
5¾	88.29	.55	16,20	7½	150.21	.75	16,20
6	96.13	.55	16,20	8	170.90	1.10	16,20

CHROME MOLYBDENUM—X4130

HEAT TREATED

For description and sizes carried in stock—See pages 101 and 102.

CHROME MOLYBDENUM—S.A.E. 4140

HEAT TREATED

For description and sizes carried in stock—See pages 103 and 104.

AN AID FOR STEEL USERS

The increased production speeds and improved manufacturing standards of the last few years have emphasized the need for greater uniformity and higher quality in steels.

Ryerson began work on this problem several years ago. By tightening specifications and making inspections more rigid, we gradually built up stocks of these better steels. Today we are in a position to definitely and unequivocally certify to the known high quality and uniformity of all steel in stock.

RYCO HEAT TREATED MACHINERY STEEL

Identification Colors: Black and Aluminum

A tough, strong, general purpose steel, reasonably low in price. Recommended for applications where more strength, toughness and endurance are required than is provided by straight carbon steels. Furnished already heat treated and machine straightened.

A very good, smooth, finish cut can be taken without difficulty or special precaution. Like any steel of high physical properties, Ryco is somewhat more difficult to machine than screw stock, yet it cuts cleaner and more freely than either chrome nickel or 3½% nickel steel. Especially suitable for spindles, axles, valve stems, screws, U-bolts, tie-rods, etc., when parts are designed with regard for physical properties shown.

HOT ROLLED ROUNDS

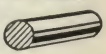
Typical minimum physical properties—Tensile strength, 100,000 pounds per square inch; yield point 70,000 pounds per square inch; reduction of area 50%; elongation 20% in 2 inches; Brinell hardness 220.

Heat Treated—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
3/8	.376	.40	16	3 1/8	26.08	.25	Chgo. 16
7/16	.511	.30	Chgo. 16	3 1/4	28.21	.25	16
1/2	.668	.20	16	3 3/8	30.42	.25	Chgo. 16
5/8	1.04	.10	16	3 1/2	32.71	.25	16
3/4	1.50	Base	16	3 5/8	35.09	.25	Chgo. 16
7/8	2.04	"	16	3 3/4	37.55	.25	16
1	2.67	"	16	3 7/8	40.09	.25	Cinc. 18
1 1/8	3.38	"	16	4	42.73	.25	16
1 1/4	4.17	"	16	4 1/8	45.43	.25	Cinc. 18
1 3/8	5.05	"	16	4 1/4	48.23	.25	Chgo. 16
1 1/2	6.01	"	16	4 3/8	51.11	.25	Cinc. 18
1 5/8	7.05	.10	16	4 1/2	54.08	.25	16
1 3/4	8.18	.10	16	4 5/8	57.12	.35	Cinc. 18
1 7/8	9.39	.10	16	4 3/4	60.25	.35	16
2	10.68	.10	16	4 7/8	63.46	.35	Cinc. 18
2 1/8	12.06	.15	16	5	66.76	.35	16
2 1/4	13.52	.15	16	5 1/4	73.60	.45	16
2 3/8	15.06	.15	20	5 3/8	77.15	.45	Cinc. 20
2 1/2	16.69	.15	16	5 1/2	80.78	.45	16
2 5/8	18.40	.20	Chgo. 16	5 3/4	88.29	.55	Cinc. 18
2 3/4	20.20	.20	16	6	96.13	.55	16
2 7/8	22.07	.20	Cinc. 16	6 1/2	112.82	.65	Cinc. 18
3	24.03	.20	16				

RYCO HEAT TREATED MACHINERY STEEL

COLD FINISHED ROUNDS



Shipped from our Chicago Plant

Physical Properties—Cold Finished Ryco answers to the same general physical description as Hot Rolled Ryco except that the ductility as measured by elongation and reduction of area may be slightly lower, owing to the effect of cold drawing.

Heat Treated—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
3/4	1.50	.60	16
1	2.67	.55	16
1 1/2	6.01	.60	16

Tool Steel 123
Sheets 12[illegible]
Spec. Sheets 157
Stainless 167
Tubing 189
Bir. Tube Babbit 203
[illegible]ain Rod 213
Bolt Reir 22[illegible]
Data 243
C[illegible]

RY-ARM HEAT TREATED ARMATURE STEEL

Heat Treated—Machine Straightened

Identification Colors: Red and Aluminum

A special heat-treated steel developed for armature shafts. The nature of the heat treatment given this tough, strong special analysis steel results in a bar with less tendency to warp during machining operations than most heat-treated alloys. It also develops higher fatigue resistance and increases toughness while keeping the tensile strength high.

A very good finish can be produced without special precaution and heavy cuts can be taken without excessive wear on the tools.

RY-AX HEAT TREATED AXLE STEEL

Heat Treated—Machine Straightened

Identification Color: Aluminum

A steel similar to Ry-Arm but with physical properties especially suitable for mine car and locomotive axles.

Ry-Ax can be used for all parts requiring high physical properties and toughness. It is not too hard to machine—cuts more easily than chrome nickel steel—and a very good finish can be produced with reasonable care.

RY-AX AND RY-ARM HOT ROLLED ROUNDS

Hot Rolled—Heat Treated—Machine Straightened

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths., Ft.
3/8	.376	.40	16	3	24.03	.20	16
7/16	.511	.30	Chgo. 16	3 1/8	26.08	.25	Chgo. 16
1/2	.668	.20	16	3 1/4	28.21	.25	16
5/8	1.04	.10	16	3 3/8	30.42	.25	Chgo. 16
3/4	1.50	Base	16	3 1/2	32.71	.25	16
7/8	2.04	"	16	3 5/8	35.09	.25	Chgo. 16
1	2.67	"	16	3 3/4	37.55	.25	16
1 1/8	3.38	"	16	4	42.73	.25	16
1 1/4	4.17	"	16	4 1/8	54.43	.25	Cinc. 18
1 3/8	5.05	"	16	4 1/4	48.23	.25	Chgo. 16
1 1/2	6.01	"	16	4 3/8	51.11	.25	Cinc. 18
1 5/8	7.05	.10	16	4 1/2	54.08	.25	16
1 3/4	8.18	.10	16	4 5/8	57.12	.35	Cinc. 18
1 7/8	9.39	.10	16	4 3/4	60.25	.35	16
2	10.68	.10	16	4 7/8	63.46	.35	Cinc. 18
2 1/8	12.06	.15	16	5	66.76	.35	16
2 1/4	13.52	.15	16	5 1/4	73.60	.45	16
2 3/8	15.06	.15	16	5 3/8	77.15	.45	Cinc. 20
2 1/2	16.69	.15	16	5 1/2	80.78	.45	16
2 5/8	18.40	.20	Chgo. 16	5 3/4	88.29	.55	Cinc. 18
2 3/4	20.20	.20	16	6	96.13	.55	16
2 7/8	22.07	.20	Cinc. 16	6 1/2	112.82	.65	Cinc. 18

RYERSON TOOL STEELS

All Ryerson Tool Steels are made under our specifications to a narrow range of elements and controlled hardening characteristics. They are tested in advance by heat treatment for degree of surface hardness, depth of hardness and core structure. Grain structure in the annealed condition is held to close limits in order to develop uniform machinability.

Bars are painted full length with a distinguishing color which permanently and unmistakably identifies the grade. The Ryerson Special Steel Dept. will be glad to help you solve your steel problems. Write us about your needs.

Ry-Alloy 128
B.F.D. 130
R.D.X. 132
Sheets 134
Drill Rod 135

RYERSON V.D. STEEL

Identification Color: Black

An all-purpose water hardening steel with remarkable hardening characteristics that permit a wide variation in treatment with uniformly good results. Although easy to machine, V. D. Steel develops high hardness and toughness after heat treatment.

Used for punches, blanking and forming dies, shear blades, cold beading dies, rivet sets, pneumatic and hand chisels, cutters, taps, general shop tools and other applications where uniform, high quality water hardening carbon tool steel is required.

We recommend hardening in water at 1425° - 1450° F. for most applications but on dies and parts which require a greater depth of hardness, temperatures as high as 1550° F. may be safely used. On certain light, thin sections, oil may be used as a quenching medium. Where extreme hardness is desired quenching may be done in brine. Due to the special analysis of V. D. Steel a greater variation in hardening temperature is permissible than in straight carbon steels. Even with a quench at 1550° F. the steel shows a fine grain structure and will retain its toughness.

For accurate hardening and tempering instructions on your particular problem we suggest you permit us to assist you with our recommended heat treatment.

Tool Steel 123

Effect of Tempering on Disc, 2" Rd. x 5/8" Thick
V. D. Steel water quenched at 1450° F.

	As quenched No draw	Drawing Temperature of 100°	200°	300°	400°	500°	600°	700°
Rockwell C	68½	68	68	67	61	60	55	51
Brinell	725	712	712	668	595	578	500	448
Scleroscope	96	96	94	90	80	80	71	65

In any interpretation, allowance should be made for size of section, equipment used and method of handling.

Sheets 12[illegible]
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbit 203
[illegible] Rod 213
Bolt Reir 22[illegible]
Data 243
C[illegible]

SQUARES—ANNEALED

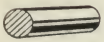
Random Lengths 12' to 14'

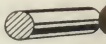
Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.	Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.
3/16	Cinc. 0.120	$0.25	1 5/8	Chgo. 8.98	Base
1/4	0.213	.10	1 3/4	10.41	"
5/16	0.332	.065	1 13/16	Chgo. 11.17	"
3/8	0.478	.04	1 15/16	Clev. 12.76	"
7/16	0.651	.04	2	13.60	"
1/2	0.850	.02	2 1/4	17.21	"
9/16	1.08	.02	2 1/2	21.25	"
5/8	1.33	.02	2 3/4	25.71	$0.01
3/4	1.91	.01	3	30.60	.01
7/8	2.60	.01	3 1/4	Clev. 35.91	.015
1	3.40	.005	3 1/2	41.65	.015
1 1/8	4.30	.005	4	54.40	.015
1 1/4	5.31	.005	4 1/2	68.85	.02
1 3/8	6.43	.005	5	85.00	.02
1 1/2	7.65	Base	6	122.40	.025

RYERSON V.D. STEEL

Identification Color: Black

ROUNDS—ANNEALED





Random Lengths 12′ to 14′

Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.
1/4	0.167	$0.05
5/16	0.261	.04
3/8	0.376	.03
7/16	0.511	.03
1/2	0.668	.02
9/16	0.845	.02
5/8	1.04	.01
11/16	1.26	.01
3/4	1.50	.01
13/16	1.76	.01
7/8	2.04	.01
15/16	2.35	.01
1	2.67	.005
1 1/16	3.01	.005
1 1/8	3.38	.005
1 3/16	3.77	.005
1 1/4	4.17	.005
1 5/16	4.60	.005
1 3/8	5.05	.005
1 7/16	Bost. 5.52	.005
1 1/2	6.01	Base
1 9/16	Clev. 6.52	"
1 5/8	7.05	"
1 11/16	Clev. 7.60	"
1 3/4	8.18	"
1 13/16	Clev. 8.77	"
1 7/8	9.39	"
1 15/16	Clev. 10.02	"
2	10.68	"
2 1/16	Bost. 11.36	"
2 1/8	12.06	"
2 3/16	Clev. 12.78	"
2 1/4	13.52	"
2 5/16	Clev. 14.28	"
2 3/8	15.06	"
2 7/16	Clev. 15.87	"
2 1/2	16.69	"
2 9/16	Clev. 17.53	Base
2 5/8	18.40	"
2 11/16	Bost. 19.29	"
2 3/4	20.19	"
2 13/16	Clev. 21.12	$0.005
2 7/8	22.07	.005
3	24.03	.005
3 1/16	Clev. 25.05	.01
3 1/8	26.08	.01
3 3/16	Clev. 27.13	.01
3 1/4	28.21	.01
3 5/16	Clev. 29.30	.01
3 7/16	Clev. 31.55	.01
3 1/2	32.71	.01
3 9/16	Clev. 33.89	.01
3 5/8	35.09	.01
3 11/16	Clev. 36.31	.01
3 3/4	37.55	.01
3 13/16	Clev. 38.81	.01
4	42.73	.01
4 1/16	Clev. 44.07	.02
4 1/4	48.23	.02
4 1/2	54.08	.02
4 3/4	60.25	.02
5	66.76	.02
5 1/4	73.60	.04
5 1/2	80.78	.04
5 3/4	88.29	.04
6	96.13	.04
6 1/2	112.82	.045
7	130.85	.045
7 1/4	140.36	.0375
7 1/2	Chgo. 150.21	.0375
8	170.90	.0375
9	216.30	.03
10	Chgo. 267.04	.025

OCTAGONS—NOT ANNEALED

Random Lengths 12′ to 14′

Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.
1/4	0.176	$0.05
5/16	0.275	.04
3/8	0.396	.03
7/16	0.539	.03
1/2	0.704	.02
9/16	0.891	.02
5/8	1.100	.01
3/4	1.584	.01
7/8	2.156	$0.01
1	2.817	.005
1 1/8	3.565	.005
1 1/4	4.401	.005
1 1/2	6.338	Base
1 3/4	8.626	"
2	Chgo. 11.266	"

Extra for Annealing 1½c per pound.

Cutting and Quantity Extras in back of book.

RYERSON V.D. STEEL

Identification Color: Black

HEXAGONS—NOT ANNEALED

Random Lengths 12′ to 14′

Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.	Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.
1/4	0.184	$0.05	7/8	2.254	$0.01
5/16	0.287	.04	1	2.945	.005
3/8	0.414	.03	1 1/8	3.727	.005
7/16	0.564	.03	1 1/4	4.601	.005
1/2	0.736	.02	1 1/2	6.625	Base
5/8	1.150	.01	2	11.780	"
3/4	1.656	.01			

OCTAGONS—ANNEALED

Random Lengths 12′ to 14′

Shipped from our Cleveland Plant

Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.	Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.
1 1/8	3.565	$0.005	1 5/8	7.438	Base
1 3/16	3.972	.005			

BILLETS—NOT ANNEALED

Size in Inches	Stock Lengths Ft.	Size in Inches	Stock Lengths Ft.
3x 3	Chgo. 6, 8	8x 8	Chgo. 5 to 6
4x 4	Chgo. 6, 10 to 12	12x12	Clev. 6 to 8
6x 6	Chgo. 6		

FLATS—ANNEALED

Random Lengths 12′ to 14′

Size in Inches	Wt. Per Ft., Lbs.	Size Extra Per Lb.	Size in Inches	Wt. Per Ft., Lbs.	Size Extra Per Lb.
1/8x 3/8	0.159	$0.20	3/16x 3/8	Bost. 0.239	$0.10
1/2	0.213	.10	1/2	0.319	.07
5/8	0.266	.10	5/8	0.398	.07
3/4	0.319	.07	3/4	0.478	.05
7/8	0.372	.07	1	0.638	.04
1	0.425	.06	1 1/4	0.797	.03
1 1/8	Chgo. 0.477	.06	1 1/2	0.956	.03
1 1/4	0.531	.05	1 3/4	1.12	.03
1 1/2	0.638	.05	2	1.28	.03
1 3/4	0.744	.05	2 1/2	1.59	.03
2	0.850	.05	3	1.91	.03
2 1/2	1.063	.05	3 1/2	Chgo. 2.23	.03
3	1.275	.05			

(Continued)

Extra for Annealing 1½c per pound.

Cutting and Quantity Extras in back of book.

Sheets 13
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbi 203
Rod 213
Bolt Rei 22
Data 243

RYERSON V.D. STEEL

Identification Color: Black

FLATS—ANNEALED—(Cont'd)

Random Lengths 12′ to 14′

Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.
(Continued)		
1/4x 3/8	0.319	$0.06
1/2	0.425	.05
5/8	0.531	.05
3/4	0.638	.04
7/8	0.744	.04
1	0.850	.03
1 1/8	0.956	.03
1 1/4	1.06	.02
1 1/2	1.28	.015
1 3/4	1.49	.015
2	1.70	.015
2 1/4	1.91	.015
2 1/2	2.13	.015
2 3/4	Chgo. 2.34	.015
3	2.55	.015
3 1/4	2.76	.015
3 1/2	2.98	.015
4	3.40	.015
4 1/2	Chgo. 3.83	.025
5	4.25	.025
5 1/2	Chgo. 4.68	.04
6	5.10	.04
5/16x 3/8	0.398	.05
1/2	0.531	.04
5/8	0.664	.04
3/4	0.797	.03
7/8	0.930	.03
1	1.06	.02
1 1/8	1.20	.02
1 1/4	1.33	.015
1 1/2	1.59	.01
1 3/4	1.86	.01
2	2.13	.01
2 1/4	2.39	.01
2 1/2	2.67	.01
2 3/4	Chgo. 2.92	.01
3	3.19	.01
3 1/2	3.72	.01
4	4.25	.01
4 1/2	Chgo. 4.78	.02
5	5.31	.02
6	6.38	.035
3/8x 1/2	0.638	.03
5/8	0.797	.03
3/4	0.956	.02
7/8	1.12	.02
1	1.28	.015
1 1/8	Bost. 1.43	.015
1 1/4	1.59	.01
1 3/8	Bost. 1.75	.01
1 1/2	1.91	.01
1 3/4	2.23	.01
3/8x2	2.55	$0.01
2 1/4	2.87	.01
2 1/2	3.19	.01
3	3.83	.01
3 1/4	4.14	.01
3 1/2	4.46	.01
4	5.10	.01
4 1/2	5.74	.02
5	6.38	.02
5 1/2	7.01	.03
6	7.65	.03
7/16x 3/4	Bost. 1.12	.02
1 1/4	Bost. 1.86	.01
1/2x 5/8	1.06	.02
3/4	1.28	.015
7/8	1.49	.015
1	1.70	.01
1 1/8	1.91	.01
1 1/4	2.13	.01
1 1/2	2.55	.005
1 5/8	Chgo. 2.76	.005
1 3/4	2.98	.005
2	3.40	.005
2 1/4	3.83	.005
2 1/2	4.25	.005
3	5.10	.005
3 1/2	5.95	.01
4	6.80	.01
4 1/2	7.65	.02
5	8.50	.02
6	10.20	.03
9/16x1	Chgo. 1.91	.01
5/8x 3/4	1.59	.01
7/8	1.86	.01
1	2.13	.005
1 1/8	2.39	.005
1 1/4	2.66	.005
1 1/2	3.19	Base
1 3/4	3.72	"
2	4.25	"
2 1/4	4.78	"
2 1/2	5.31	"
2 3/4	5.84	"
3	6.38	"
3 1/2	7.44	.01
4	8.50	.01
4 1/2	9.56	.02
5 1/2	Chgo. 11.69	.03
5 1/2	11.69	.03
6	12.75	.03

(Continued)

Extra for Annealing 1½c per pound.

Cutting and Quantity Extras in back of book.

RYERSON V.D. STEEL

Identification Color: Black

FLATS—ANNEALED—(Cont'd)

Random Lengths 12′ to 14′

Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.
(Continued)		
3/4x 7/8	2.23	$0.01
1	2.56	.005
1¼	3.19	.005
1½	3.83	Base
1¾	4.46	"
2	5.10	"
2¼	5.74	"
2½	6.38	"
2¾	7.01	"
3	7.65	"
3¼	Chgo. 8.29	.01
3½	8.93	.01
4	10.20	.01
4½	11.48	.02
5	12.75	.02
5½	14.03	.03
6	15.30	.03
7/8x1¼	3.72	.005
1½	4.46	Base
1¾	5.21	"
2	5.95	"
2½	7.44	"
3	8.93	"
4	11.90	.01
5	14.88	.02
6	Bost. 17.85	.03
1 x1¼	4.25	.005
1½	5.10	Base
1¾	5.95	"
2	6.80	"
2¼	7.65	"
2½	8.50	"
2¾	Chgo. 9.35	"
3	10.20	"
3½	11.90	.01
4	13.60	.01
4½	15.30	.02
5	17.00	.02
6	20.40	.03
7	23.80	.03
8	27.20	.035
9	30.60	.04
10	Bost. 34.00	.045
1-1/4x1½	6.38	Base
1¾	7.44	"
2	8.50	"
2¼	9.56	"
2½	10.63	"
3	12.75	"
3½	14.88	.01
4	17.00	.01
4½	19.13	.02
5	21.25	.02
1-1/4x5½	23.38	$0.025
6	25.50	.025
7	29.75	.025
8	Chgo. 34.00	.03
1-1/2x1¾	Bost. 8.93	Base
2	10.20	"
2½	12.75	"
3	15.30	"
3½	17.85	.01
4	20.40	.01
4½	22.95	.02
5	25.50	.02
6	30.60	.025
7	Chgo. 35.70	.025
8	40.80	.025
10	51.00	.03
1-3/4x2	Bost. 11.90	Base
2½	14.88	"
3	Bost. 17.85	.01
3½	20.83	.015
4	23.80	.015
4½	Bost. 26.78	.02
5	29.75	.02
6	35.70	.025
2 x2¼	15.30	Base
2½	17.00	"
3	20.40	.01
3½	23.80	.015
4	27.20	.015
5	34.00	.02
6	40.80	.025
7	Chgo. 47.60	.025
8	54.40	.025
10	Bost. 68.00	.03
12	Bost. 81.60	.04
2-1/4x2½	Det. 19.13	Base
3	Det. 22.96	.01
3½	Det. 26.77	.015
4	Det. 30.60	.015
4½	Det. 34.42	.02
5	Det. 38.25	.02
6	Det. 45.90	.025
7	Det. 53.54	.025
8	Det. 61.20	.025
2-1/2x3	25.50	.01
3½	29.75	.015
4	34.00	.015
4½	Chgo. 38.26	.02
5	Bost. 42.50	.02
6	Bost. 51.00	.025
3 x4	40.80	.015
5	51.00	.02
6	61.20	.025

Extra for Annealing 1½c per pound.
Cutting and Quantity Extras in back of book.

Sheets 12
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbi 203
Rod 213
Bolt Rei 22
Data 243

RY-ALLOY

Shipped from our Cleveland, Chicago, Detroit and Boston Plants

Identification Color: Red

An oil hardening alloy steel which combines high hardness and deep hardness penetration with minimum distortion and freedom from cracking. Machining qualities are excellent for this type of steel. Ry-Alloy contains molybdenum, has a relatively high manganese content, and is produced by special melting, bar rolling, and annealing processes.

As Ry-Alloy has a very dense structure, it should be heated slowly, evenly, and for a sufficient length of time to insure uniform heat penetration all the way to the center of the pieces being hardened. In order to assure uniform surface, annealed bars should be ordered sufficiently oversize to permit removal of the decarburized surface.

Applications include cams, rolls, thread rolling dies, thread chasers, blanking dies and punches, drill bushings, gauges, plastic forming dies, and other parts requiring hardness, toughness and minimum distortion in hardening. Write for bulletin giving complete data.

HEAT TREATMENT

Forging: Forge at a temperature between 1675° F. and 1950° F.

Normalizing: Normalize at 1625° F. Allow 45 minutes soak for each inch of cross section.

Annealing: Anneal at 1400° F. Soak one-half hour per inch of thickness. Furnace cool as slowly as practical.

Hardening: Harden in oil at temperature between 1400° F. and 1475° F. Do not exceed 1475° F. even with large cross sections. Use the lowest heat at which the piece will harden, as this minimizes distortion.

Hardness test on 1½" Rd. specimen oil quenched at 1420° F. and drawn as indicated:

Drawing Temp.	Rockwell C Hardness	Drawing Temp.	Rockwell C Hardness	Drawing Temp.	Rockwell C Hardness
As Quenched	65½	600° F.	53½	1000° F.	43½
300° F.	62½	700°	51½	1100°	38
400°	60	800°	49½	1200°	31½
500°	57	900°	47	1300°	25

ROUNDS—SPHEROIDIZED ANNEALED

Random lengths 12 to 14 ft.

7/16	1⅛	1¾	2⅜	3	4	5¼	6½
⅝	1¼	1⅞	2½	3⅛	4¼	5½	7
¾	1⅜	2	2⅝	3¼	4½	5¾	8
⅞	1½	2⅛	2¾	3½	4¾	6	
1	1⅝	2¼	2⅞	3¾	5	6¼	

SQUARES—SPHEROIDIZED ANNEALED

Random lengths 12 to 14 ft.

¾	1¾	2½	3¼	4½
1	2	2¾	3½	5¼
1¼	2¼	3	4	6
1½				

BILLETS—ANNEALED

Shipped from our Cleveland Plant

Random lengths 10 to 12 ft.

2	4	6	8	9¾	10	12

RY-ALLOY—(Cont'd)

Shipped from our Boston, Cleveland, Chicago and Detroit Plants
Identification Color: Red

FLATS—SPHEROIDIZED ANNEALED

Random lengths 12 to 14 ft.

3/8x1	3/4x4	1 1/4x3 1/2	1 3/4x2	2 x5 1/2	2 1/2x8
1 1/2	4 1/2	4	2 1/4	6	10
2	5	4 1/2	2 1/2	7	3 x3 1/2
1/2x1 1/2	5 1/2	5	3	8	4
2	6	5 1/2	3 1/2	10	4 1/2
2 1/2	1x1 1/4	6	4	12	5
3	1 1/2	8	4 1/2	2 1/4x2 1/2	6
4	2	1 1/2x2	5	3	7
6	2 1/2	2 1/2	5 1/2	3 1/2	8
5/8x1	3	3	6	4	10
1 1/2	3 1/2	3 1/2	6 1/2	4 1/2	3 1/2x4
2	4	4	7	5	5
2 1/2	4 1/2	4 1/2	7 1/2	5 1/2	5 1/2
3	5	5	8	6	6
4	5 1/2	5 1/2	10	2 1/2x3	8
6	6	6	12	3 1/2	4 x4 1/2
3/4x1 1/4	7	6 1/2	2 x2 1/2	4	5
1 1/2	8	7	3	4 1/2	5 1/2
2	1 1/4x1 1/2	7 1/2	3 1/2	5	6
2 1/2	2	8	4	5 1/2	5 x5 1/2
3	2 1/2	10	4 1/2	6	6
3 1/2	3	12	5		

RYERSON "SHOCK" TOOL STEEL

Shipped from our Chicago Plant
Identification Color: Pink

A general purpose heavy duty alloy tool steel that lends itself to both cold and hot working applications. It conforms to all Ryerson tool steel standards of quality and uniformity and machines without difficulty when annealed.

Recommended for severe hot or cold punching, hot or cold shearing, hot bending, pneumatic chisels, track tools and other applications where extreme shock and heavy service are encountered.

Heat Treatment

FORGING:

Heat slowly, to a uniform temperature of 1750-1900° F. Allow the piece to remain at heat for sufficient time to insure thorough penetration. Because of the alloying elements in shock steel more time is needed than for straight carbon steel. Do not forge below 1650° F. After forging, heat to 1600° F. Allow to cool in still air.

HARDENING:

Harden at 1650-1800° F. depending on size. Oil quench.

Approx. hardness at various temperatures:

Draw	Rockwell C	Draw	Rockwell C
As quenched from 1750° in oil	57	800° F.	53
450° F.	56	900° F.	50
550° F.	55	1000° F.	47
750° F.	54		

Rounds—Annealed

7/16	11/16	7/8	1 1/16	1 5/16	1 5/8	2 1/4	3 1/4	4 1/2	6 1/8
5/8	3/4	15/16	1 1/8	1 3/8	1 3/4	2 1/2	4	4 3/4	
5/8	13/16	1	1 1/4	1 1/2	2	3	4 1/8	5 1/8	

Octagons—Annealed

5/16	3/8	5/8	†3/4	†7/8	1	1 1/8	1 1/4

† Shipped from our New York plant.

Hexagons—Annealed

	3/4	7/8

Sheets 12
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbit 203
Rod 213
Bolt Rein 22
Data 243

RYERSON B—F—D TOOL STEEL

(Best—For—Dies)

Identification Color: Aluminum

An oil hardening, non-deforming alloy die steel combining the good points of water hardening and oil hardening tool steel and eliminating most of their objectionable features.

B.F.D. can be depended upon for hardness and long life. Costly die cracking in hardening is reduced to the minimum.

B.F.D. has a very close, dense grain and is surprisingly durable on the cutting edge, which makes it suitable for many uses where ordinary oil hardening tool steels would not prove satisfactory.

Recommended applications include: taps and dies, plug and ring gauges, reamers, hobs, cutters, broaches, punches and dies, roll thread dies, press tools, blanking and forming dies, piercing, shaving, notching and trimming dies.

HEAT TREATMENT

FORGING: Forge at a temperature between 1800° and 1900° F.

NORMALIZING: Normalize between 1475° and 1425° F.

ANNEALING: Anneal at a temperature between 1450° and 1500° F.

HARDENING: Preheat slowly and thoroughly between 1250° and 1350° F. and then transfer to a furnace between 1550° and 1650° F. If two furnaces are not available, raise the heat slowly to 1250° to 1350° F. and hold. Then raise the temperature to between 1550° and 1600° F. and hold at this top range only long enough to insure complete heat penetration. B.F.D. should not be held at the hardening temperature any longer than is absolutely necessary, because steels of this type are subject to rapid decarburization. In order to prevent decarburization, the furnace atmosphere should be kept neutral or maintained with a slight excess of fuel. The temperature of the draw depends entirely upon the desired hardness. 450° F. is considered a good average draw, although we recommend as high a draw as possible to meet your requirements. This insures maximum ductility and toughness.

Annealed Rounds

1/4	5/8	1	1 3/8	1 7/8	2 1/2	3 3/4	5
5/16	11/16	1 1/8	1 1/2	2	2 3/4	4	5 1/2
3/8	3/4	1 3/16	1 5/8	2 1/8	3	4 1/4	6
7/16	13/16	1 1/4	1 11/16	2 1/4	3 1/4	4 1/2	7
1/2	7/8	1 5/16	1 3/4	2 3/8	3 1/2	4 3/4	7 1/2
9/16	15/16						

Annealed Flats

1/4 x 1/2	3/8 x 2	5/8 x 3/4	3/4 x 4	1 x 6	1 1/2 x 3 1/2
3/4	2 1/4	1	5	8	4
1	2 1/2	1 1/4	6	1 1/8 x 2 1/8	5
1 1/8	2 3/4	1 1/2	7/8 x 1 1/8	3 1/2	6
1 1/4	1/2 x 5/8	1 3/4	1 1/4	1 1/4 x 1 1/2	8
1 3/8	3/4	2	1 x 1 1/4	1 3/4	1 3/4 x 2
1 1/2	1	2 1/2	1 1/2	2	2 1/4
2	1 1/4	3	1 5/8	2 1/2	2 1/2
2 1/2	1 3/8	4	1 3/4	3	2 3/4
5/16 x 1 1/2	1 1/2	3/4 x 1	2	4	3
3/8 x 1/2	2	1 1/4	2 1/4	5	2 x 2 1/2
3/4	2 1/2	1 1/2	2 1/2	6	3
1	3	1 3/4	3	7	4
1 1/4	4	2	3 1/2	1 1/2 x 2	5
1 3/8	5	2 1/2	4	2 1/4	6
1 1/2	6	3	4 1/2	2 1/2	2 1/2 x 3
1 5/8	9/16 x 1	3 1/2	5	3	3 x 4
1 3/4					

RYERSON B—F—D TOOL STEEL

(Best—For—Dies)

Identification Color: Aluminum

Annealed Squares

1/4	7/16	3/4	1 1/4	1 3/4	2 1/2	3 1/2
5/16	1/2	7/8	1 3/8	2	2 3/4	4
3/8	5/8	1	1 1/2	2 1/4 Chgo.	3	

RYERSON SELF-TEMPERING TOOL STEEL

Shipped from our Cincinnati Plant

Identification Colors: Bronze and Aluminum

A newly developed Chisel Steel which can be oil quenched and used without drawing or tempering.

Bars should be cut by cold sawing or hot cutting on the anvil. Nicking and cold breaking is not recommended for this or any other type of Tool Steel.

Hand Chisels—Forge at about 1800° F. (yellow heat) and do not work after losing heat color. Re-heat if necessary. Grind before quenching.

To harden, heat 2" of cutting end to about 1600° F. (bright red) and quench in oil until cold. No draw is necessary.

If water hardening is desired, use hardening heat of about 1525° F. (bright cherry red) and water quench. It is advisable, although not always necessary, to draw to dark straw color after water quenching.

Pneumatic Tools—For Pneumatic Tools it is recommended that the entire blank, after machining, be heated to about 1600° F. and oil quenched and drawn to about 900° F. (dull red in dark place). After this treatment, to harden the cutting edge, use the method recommended for hand chisels.

OCTAGONS—ANNEALED

Random lengths 18' to 20'

Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.	Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.
3/8	0.396	$0.03	3/4	1.584	$0.01
1/2	0.704	.02	7/8	2.156	.01
5/8	1.100	.01	1	2.817	.005

HEXAGONS—ANNEALED

Random lengths 18' to 20'

Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.	Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.
3/4	1.656	$0.01	1	2.945	$0.005
7/8	2.254	.01			

RYERSON HOLLOW DRILL STEEL

This is a special analysis water hardening steel for severe service in hard rock drilling. Metal core insures a smooth, round hole in the center. Alloying elements give it a finer grain structure after heat treatment than most other drill steels. This type of steel hardens in water at 1375°-1425° Fahrenheit. Should be drawn back well to insure toughness. Carried in stock unannealed.

Size in Inches	Hole Dia. in Inches	Weight Per Ft. Lbs.	Random Lengths Feet
7/8 Hexagon	17/64	2.04	20
1 Hexagon	17/64	2.68	Cinc. 20
1 1/4 Round	11/32	3.87	Cinc. 20

Sheets 12
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbi' 203
Rod 213
Bolt Reit 22
Data 243

RYERSON R. D. X. STEEL

Shipped from our Chicago and Detroit Plants

Identification Colors: Red and White

A water hardening steel, particularly suitable for open and solid cold header dies, punches, rivet sets, shear blades, hand and pneumatic chisels, concrete breakers, rolls, blacksmith tools, letter stamps, and other purposes requiring hardness and extreme toughness.

This steel machines well in the annealed state and has a wide hardening range.

Tempering Characteristics

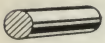
1⅜" Round Bar—Water Quenched at 1450° F.

Draw	Surface Hardness Rockwell "C"	Draw	Surface Hardness Rockwell "C"
As Quenched	66	500° F.	56
200° F.	65	600° F.	52
300° F.	64	700° F.	47
400° F.	62		

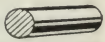
Fracture of 1⅜" Round quenched at 1450° F., indicates hardness penetration of about $\frac{5}{16}$".

ANNEALING: Heat to 1450° F., cool slowly as possible.

HARDENING: Water quench from 1425° F. to 1600° F., depending upon size and application.



Rounds—Spheroidized—Annealed



Random Lengths 12′ to 14′

Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.	Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.
½	0.668	$0.02	2⅝	18.40	Base
⅝	1.04	.01	2¾	20.19	"
¾	1.50	.01	2⅞	22.07	$0.005
⅞	2.04	.01	3	24.03	.005
1	2.67	.005	3⅛	26.08	.01
1⅛	3.38	.005	3¼	28.21	.01
1¼	4.17	.005	3$\frac{5}{16}$	29.30	.01
1⅜	5.05	.005	3⅜	30.42	.01
1½	6.01	Base	3½	32.71	.01
1⅝	7.05	"	3⅝	35.09	.01
1¾	8.18	"	3¾	37.55	.01
1⅞	9.39	"	3⅞	40.10	.01
2	10.68	"	4	42.73	.01
2⅛	12.06	"	4¼	48.23	.02
2¼	13.52	"	4½	54.08	.02
2⅜	15.06	"	4¾	60.25	.02
2½	16.69	"	5	66.76	.02
			5½	80.78	.04

Squares—Spheroidized—Annealed

Random Lengths 12′ to 14′

Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.	Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.
1½	7.65	Base	3⅛	33.20	$0.015
2	13.60	"	4⅝	72.73	.02

Extra for Annealing 1½c per pound.

RYERSON R. D. X. STEEL

Shipped from our Chicago and Detroit Plants

Identification Colors: Red and White

Hexagons—Not Annealed

Random Lengths 12' to 14'

Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.	Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.
¾	1.656	$0.01	1⅛	3.727	$0.005
⅞	2.254	.01			

Flats—Spheroidized—Annealed

Shipped from our Chicago Plant

Random Lengths 12' to 14'

Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.	Size in Inches	Wt. Per Ft. Lbs.	Size Extra Per Lb.
½x2	3.40	$0.005	1¼x2½	10.63	Base
3	5.10	.005	3	12.75	"
4	6.80	.01	4	17.00	$0.01
6	10.20	.03	5	21.25	.02
¾x2	5.10	Base	6	25.50	.025
3	7.65	"	1½x2	10.20	Base
4	10.20	.01	3	15.30	"
6	15.30	.03	4	20.40	.01
1 x1½	5.10	Base	6	30.60	.025
2	6.80	"	2 x3	20.40	.01
2½	8.50	"	4	27.20	.015
3	10.20	"	6	40.80	.025
4	13.60	.01	2½x3	25.50	.01
5	17.00	.02	6	51.00	.025
6	20.40	.03			

Extra for Annealing 1½c per pound.

OCTAGON STEEL POKER BARS

HOT ROLLED—FORGING QUALITY

Shipped from our New York Plant

These bars are suitable for poker bars, pinch bars, chisels and other similar tools.

Identification Colors: Red, White and Yellow

HOT ROLLED—OPEN HEARTH—SILICON KILLED

Size in Inches	Weight per Ft. Lbs.	Net Extra for Size	Random Lengths Ft.	Size in Inches	Weight per Ft. Lbs.	Net Extra for Size	Random Lengths Ft.
¾	1.584	Spec.	20	1⅛	3.565	Spec.	20
⅞	2.157	"	20	1¼	4.401	"	20
1	2.817	"	20	1½	6.338	"	20

TOOL STEEL FORGINGS

Tool steel forgings in any of the different grades of tool steel shown in this Stock List can be furnished promptly. Write us about your requirements for forged discs, rings, die blocks, etc.

Sheets 12
Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbit 203
Rod 213
Bolt Rei 22
Data 243
C

RYERSON HIGH SPEED TOOL HOLDER BITS

Uniform, high quality bits made from our standard grade high speed steel. Cut to standard tool holder lengths, beveled on both ends and hardened. Ready for grinding and use. Packed in substantial boxes.

Squares

Size in Inches	Approx. Wt. Each in Oz.	Size in Inches	Approx. Wt. Each in Oz.	Size in Inches	Approx. Wt. Each in Oz.
3/16	1/2	7/16	3 1/5	3/4	10
1/4	1	1/2	4 1/2	7/8	20
5/16	1 1/8	5/8	8	1	26
3/8	2				

Flats

Shipped from our Chicago Plant

Size in Inches	Approx. Wt. Each in Oz.	Size in Inches	Approx. Wt. Each in Oz.	Size in Inches	Approx. Wt. Each in Oz.
1/4x3/8	1 1/2	3/8x1/2	3	1/2x3/4	8
5/16x7/16	2 3/4	7/16x9/16	6	5/8x7/8	14

RYERSON SPECIAL HIGH SPEED TOOL HOLDER BITS

Made from the best heavy duty High Speed steel, these bits are intended for the heaviest, fastest cutting and will prove satisfactory for the most difficult jobs. Used for all purposes demanding greater speeds, feeds, and cuts than the ordinary high speed steel will withstand. Cut to standard tool holder lengths, beveled on both ends, and hardened ready for grinding and use.

Squares

Size in Inches	Approx. Wt. Each in Oz.	Size in Inches	Approx. Wt. Each in Oz.	Size in Inches	Approx. Wt. Each in Oz.
3/8	2	1/2	4 1/2	3/4 Chgo.	10
7/16	3 1/5	5/8 Chgo.	8		

RYERSON HIGH SPEED TOOL STEEL

A complete range of sizes and shapes available for prompt shipment.

RYERSON TOOL STEEL SHEETS

Suitable for small tools, springs, shims, scrapers, blades, saws, knives, and for other applications where a high grade of thin tool steel is required. Rolled from high grade Ryerson Tool Steel of about 1.00% carbon. Sheets have a smooth blue finish, are well greased and will harden in oil or water at approx. 1425° F., depending upon the degree of hardness desired.

Semi-Annealed—Stock Sizes

Gauge & Size in Inches	Est. Wt. Per Lineal Ft. Lbs.	Sheet Size in Inches	Gauge Extra Per Lb.	Birmingham Wire Gauge	Est. Wt. Per Lineal Ft. Lbs.	Sheet Size in Inches	Gauge Extra Per Lb.
1/4	15.30	18x72	Base	19	2.57	18x72	$0.04
3/16	11.48	18x72	"	20	2.14	18x72	.04
10	8.20	18x72	"	21	1.96	18x72	.05
11	7.34	18x72	"	22	1.71	18x60-72	.06
12	6.75	18x72	"	23	1.53	18x60-72	.08
13	5.81	18x72	"	24	1.35	18x60-72	.10
14	5.08	18x72	"	25	1.22	18x60-72	.12
15	4.41	18x72	$0.005	26	1.10	18x60-72	.14
16	3.98	18x72	.01	27	.98	18x60-72	.16
18	3.00	18x72	.03	28	.80	18x60-72	.18

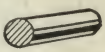
RYERSON CARBON STEEL DRILL ROD

A high grade drill rod made of good tool steel and finished with extreme accuracy to insure a smooth finish.

A quality product recommended for drills, taps, dies and other uses where accuracy, stiffness and toughness are essential.

POLISHED ROUNDS

3 Foot Lengths



Sizes Marked * also Carried in 12 Foot Lengths

Size Decimal Diameter	Size Stubs Ga.	Size Morse Ga.	Wt. Per Ft. Lbs.	List Price Per Lb.
.013	80	..	.0004	$35.00
.014	79	..	.0005	35.00
.015	78	..	.0006	35.00
.0156	1/64	1/64	.0007	35.00
.016	77	78	.0007	35.00
.018	76	77	.0009	17.00
.020	75	76	.0011	17.00
.022	74	..	.0013	11.00
.023	73	..	.0014	11.00
.024	72	73	.0015	11.00
.026	71	71	.0018	7.50
.027	70	..	.0020	7.50
.029	69	..	.0023	7.50
.030	68	..	.0024	7.50
.031	67	68	.0025	5.00
.0312	1/32	1/32	.0026	5.00
.032	66	67	.0027	5.00
.033	65	66	.0029	5.00
.035	64	65	.0033	5.00
.036	63	64	.0035	5.00
.037	62	63	.0037	5.00
.038	61	62	.0038	5.00
.039	60	61	.0040	5.00
.040	59	60	.0043	3.50
.041	58	59	.0045	3.50
.042	57	58	.0050	3.50
.043	..	57	.0050	3.50
.045	56	..	.0060	3.50
.0465	..	56	.0060	3.50
.0468	3/64	3/64	.0060	3.50
.050	55	..	.0070	2.75
.052	..	55	.0070	2.75
.055	54	54	.0080	2.75
.058	53	..	.0090	2.75
.0595	..	53	.0090	2.75
.0625	1/16	1/16	.0100	2.25
.063	52	..	.0110	2.25
.066	51	..	.0120	2.25
.067	..	51	.0120	2.25
.069	50	..	.0130	2.25
.070	..	50	.0130	2.25
.072	49	49	.0140	2.25
.075	48	..	.0150	2.25
.076	..	48	.0150	2.25
.077	47	..	.0160	$2.25
.0781	5/64	5/64	.0170	1.75
.079	46	..	.0170	1.75
.081	45	46	.0180	1.75
.082	..	45	.0180	1.75
.085	44	..	.0190	1.75
.086	..	44	.0190	1.75
.088	43	..	.0210	1.75
.089	..	43	.0210	1.75
.092	42	..	.023	1.75
.0935	..	42	.023	1.75
.0937	*3/32	3/32	.023	1.75
.095	41	..	.024	1.60
.096	..	41	.024	1.60
.097	40	..	.025	1.60
.098	..	40	.025	1.60
.099	39	..	.026	1.60
.0995	..	39	.026	1.60
.101	38	..	.028	1.60
.1015	..	38	.028	1.60
.103	37	..	.029	1.60
.104	..	37	.029	1.60
.106	36	..	.030	1.60
.108	35	..	.031	1.60
.1093	7/64	7/64	.031	1.45
.110	34	35	.032	1.45
.112	33	..	.034	1.45
.113	..	33	.035	1.45
.115	32	..	.036	1.45
.116	..	32	.037	1.45
.120	31	31	.039	1.45
.125	*1/8	1/8	.042	1.30
.127	30	..	.043	1.30
.1285	..	30	.044	1.30
.134	29	..	.048	1.30
.136	..	29	.051	1.30
.139	28	..	.052	1.30
.1406	9/64	9/64	.052	1.15
.143	27	..	.055	1.15
.144	..	27	.056	1.15
.146	26	..	.057	1.15
.147	..	26	.058	1.15
.148	25	..	.059	1.15

(Continued)

Write for discounts.

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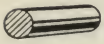
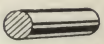
C

RYERSON CARBON STEEL DRILL ROD



POLISHED ROUNDS—(Cont'd)



3 Foot Lengths

Sizes Marked * Also Carried in 12 Foot Lengths

Decimal Diameter	Size Stubs Ga.	Size Morse Ga.	Wt. Per Per Ft.	List Price Per Lb.
(Continued)				
.1495	..	25	.060	$1.15
.151	24	..	.061	1.15
.152	..	24	.062	1.15
.153	23	..	.063	1.15
.154	..	23	.064	1.15
.155	22	..	.065	1.15
.1562	*5/32	5/32	.066	1.05
.157	21	22	.066	1.05
.159	..	21	.067	1.05
.161	20	20	.069	1.05
.164	19	..	.072	1.05
.166	..	19	.074	1.05
.168	18	..	.076	1.05
.1695	..	18	.077	1.05
.1718	11/64	..	.078	1.05
.172	17	..	.079	.95
.175	16	..	.082	.95
.177	..	16	.084	.95
.178	15	..	.085	.95
.180	14	15	.087	.95
.182	13	14	.089	.95
.185	12	13	.092	.95
.1875	*3/16	3/16	.094	.85
.188	11	..	.094	.85
.189	..	12	.095	.85
.191	10	11	.096	.85
.1935	..	10	.099	.85
.194	9	..	.099	.85
.196	..	9	.102	.85
.197	8	..	.104	.85
.199	7	8	.106	.85
.201	6	7	.107	.85
.2031	13/64	13/64	.109	.80
.204	5	6	.109	.80
.2055	..	5	.112	.80
.207	4	..	.115	.80
.209	..	4	.118	.80
.212	3	..	.121	.80
.213	..	3	.122	.80
.2187	*7/32	..	.122	.75
.219	2	..	.129	.75
.221	..	2	.132	.75
.227	1	..	.138	.75
.228	..	1	.139	.75
.234	A	..	.147	.70
.2343	15/64	15/64	.147	.70
.238	B	..	.150	.70
.242	C	..	.154	.70
.246	D	..	.161	.70
.250	*¼	¼	.167	.65
.250	E	..	.167	.65
.257	F	..	.174	.65
.261	G	..	.181	.65
.2656	17/64	17/64	.187	.65
.266	H	..	.188	.65
.272	I	..	.198	.65

Decimal Diameter	Number or Fraction	Wt. Per Ft. Lbs.	List Price Per Lb.
.277	J	.205	$0.65
.281	K	.212	.65
.2812	*9/32	.213	.65
.290	L	.225	.65
.295	M	.233	.65
.2968	19/64	.234	.65
.302	N	.242	.65
.3125	*5/16	.260	.60
.316	O	.271	.60
.323	P	.277	.60
.3281	21/64	.287	.60
.332	Q	.294	.60
.339	R	.308	.60
.3437	*11/32	.313	.60
.348	S	.325	.60
.358	T	.342	.60
.3593	23/64	.344	.60
.368	U	.362	.60
.375	*⅜	.375	.60
.377	V	.383	.60
.386	W	.400	.60
.3906	25/64	.407	.60
.397	X	.421	.60
.404	Y	.427	.60
.4062	*13/32	.437	.60
.413	Z	.458	.60
.4218	27/64	.472	.60
.4375	*7/16	.500	.60
.4531	29/64	.542	.60
.4687	15/32	.583	.60
.4843	31/64	.625	.60
.500	*½	.667	.55
.5156	33/64	.709	.55
.5312	17/32	.750	.55
.5468	35/64	.797	.55
.5625	*9/16	.833	.55
.5781	37/64	.891	.55
.5937	19/32	.937	.55
.6093	39/64	1.000	.55
.625	*⅝	1.042	.55
.6406	41/64	1.104	.55
.6562	21/32	1.145	.55
.6718	43/64	1.187	.55
.6875	*11/16	1.250	.55
.7031	45/64	1.312	.55
.7187	23/32	1.375	.55
.7343	47/64	1.438	.55
.750	*¾	1.500	.55
.7656	49/64	1.562	.55
.7812	25/32	1.625	.55
.7968	51/64	1.708	.55
.8125	13/16	1.750	.55
.8280	53/64	1.831	.55
.8437	27/32	1.896	.55
.8593	55/64	1.970	.55

(Continued)

RYERSON CARBON STEEL DRILL ROD

POLISHED ROUNDS—(Cont'd)

3 Foot Lengths

Sizes Marked * Also Carried in 12 Foot Lengths

Decimal Diameter	Size Inches	Wt. Per Ft. Lbs.	List Price Per Lb.
.875	*7/8	2.044	$0.55
.8906	57/64	2.118	.55
.9062	29/32	2.193	.55
.9218	59/64	2.262	.55
.9375	15/16	2.347	.55
.9531	61/64	2.416	.55
.9687	31/32	2.506	.55
.9843	63/64	2.583	.55
1.000	*1	2.670	.55
1.0312	1 1/32	2.833	.55
1.0625	1 1/16	3.014	.55
1.0937	1 3/32	3.208	.55
1.125	1 1/8	3.379	.55
1.1562	1 5/32	3.565	.55
1.1875	1 3/16	3.765	$0.55
1.2187	1 7/32	3.937	.55
1.250	1 1/4	4.172	.55
1.2812	1 9/32	4.374	.55
1.3125	1 5/16	4.600	.55
1.3437	1 11/32	4.815	.55
1.3750	1 3/8	5.048	.55
1.4062	1 13/32	5.274	.55
1.4375	1 7/16	5.518	.55
1.4687	1 15/32	5.753	.55
1.500	1 1/2	6.008	.55
1.625	1 5/8	7.051	.55
1.750	1 3/4	8.178	.55
2.000	2	10.681	.55

LIME DRAWN QUALITY FLATS

3 Foot Lengths

Size in Inches	Wt. Per Ft. Lbs.	List Price Per Lb.
1/16 x 1/8	.0266	$2.25
3/16	.0398	2.15
1/4	.0531	2.05
3/8	.0797	2.05
7/16	.0930	2.00
1/2	.1063	2.00
3/32 x 3/16	.0598	1.65
1/4	.0797	1.65
3/8	.1195	1.60
7/16	.1395	1.60
1/2	.1594	1.60
1/8 x 3/16	.0797	1.30
1/4	.1063	1.20
5/16	.1328	1.20
3/8	.1594	1.20
7/16	.1859	1.15
1/2	.2125	1.15
5/8	.2656	1.15
3/4	.3188	1.15
1	.4250	1.15
5/32 x 3/8	Chgo. .1992	.95
3/16 x 1/4	.1594	.75
5/16	.1992	.75
3/8	.2391	.75
1/2	.3188	.70
5/8	.3984	.70
3/4	.4781	.70
1	.6375	.70
1/4 x 5/16	.2656	$0.65
3/8	.3188	.65
7/16	.3719	.60
1/2	.4250	.60
5/8	.5313	.60
3/4	.6375	.60
1	.8500	.60
5/16 x 3/8	.3984	.60
7/16	.4648	.60
1/2	.5313	.60
5/8	.6641	.60
3/4	.7969	.60
1	1.063	.60
3/8 x 7/16	.5578	.60
1/2	.6375	.60
5/8	.7969	.60
3/4	.9563	.60
1	1.275	.60
7/16 x 1/2	.7440	.60
5/8	.9300	.60
11/16	1.023	.60
1/2 x 9/16	.9560	.55
5/8	1.06	.55
3/4	1.28	.55
1	1.70	.55
5/8 x 7/8	1.859	.55
1 1/8	2.39	.55

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RYERSON CARBON STEEL DRILL ROD

LIME DRAWN QUALITY SQUARES

3 Foot Lengths

Size in Inches	Equiv. Decimal of Inch	Wt. Per Ft. Lbs.	List Price Per Lb.	Size in Inches	Equiv. Decimal of Inch	Wt. Per Ft. Lbs.	List Price Per Lb.
1/16	.0625	.013	$2.25	3/8	.375	.475	$0.60
5/32	.0937	.030	1.75	13/32	.406	.561	.60
1/8	.125	.053	1.30	7/16	.4375	.651	.60
9/64	.1406	.068	1.30	1/2	.500	.850	.55
5/32	.1562	.083	1.05	9/16	.5625	1.075	.55
3/16	.1875	.120	.85	5/8	.625	1.328	.55
7/32	.2187	.163	.75	11/16	.687	1.607	.55
1/4	.250	.212	.65	3/4	.750	1.913	.55
9/32	.2812	.269	.65	7/8	.875	2.603	.55
5/16	.3125	.332	.60	1	1.000	3.400	55
11/32	.3437	.402	.60				

Write for discounts.

RYERSON HIGH SPEED DRILL ROD

Shipped from our Chicago Plant

Made from a superior grade of High Speed Steel, containing about 18% Tungsten, 4% Chromium, and 1% Vanadium.

Suitable for small tools and other applications for which the best grade of High Speed Tool Steel is desired.

Polished Rounds—3 ft. Lengths

Size in Inches	Equiv. Decimal of Inch	Wt. Per Ft. Lbs.	List Price Per Lb.	Size in Inches	Equiv. Decimal of Inch	Wt. Per Ft. Lbs.	List Price Per Lb.
1/8	.125	.046	$3.00	7/16	.4375	.566	$1.65
5/32	.1562	.072	2.45	1/2	.500	.733	1.60
3/16	.1875	.103	2.10	9/16	.5625	.937	1.60
1/4	.250	.184	1.75	5/8	.625	1.157	1.55
5/16	.3125	.287	1.70	3/4	.750	1.666	1.55
3/8	.375	.412	1.65	7/8	.875	2.264	1.55

Write for discounts.

RYERSON HARDENED HIGH SPEED BARS

Identification Color: Blue

Our standard grade high speed tool steel already hardened. Carried in 2 foot lengths.

Beveled Flats

3/32 x 1/8 x 3/4	1/16 x 3/32 x 5/8	1/8 x 3/16 x 1 1/4	3/16 x 1/4 x 1 1/4
3/32 x 1/8 x 7/8	1/8 x 3/16 x 1	1/8 x 3/16 x 1 1/8	

Flats

1/4 x 3/8	1/4 x 3/4	3/8 x 1/2	1/2 x 3/4	3/4 x 1
1/4 x 1/2	5/16 x 7/16	7/16 x 9/16	5/8 x 7/8	

Squares

1/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4

No. 7 (3/16") SHEETS—HOT ROLLED

Prime Quality

Size in Inches	Weight Per Ft. Lbs.	Net Extra for Size	Stock Lgths. Ft.
No. 7 (3/16") Wt. per Sq. Ft. 7.50			
14	8.75	Base	20
16	10.00	"	20
18	11.25	"	20
20	12.50	"	20
22	13.75	"	20
24	15.00	Base	30
30	18.75	"	30
36	22.50	"	30
42	26.25	"	30
48	30.00	"	30

For 3/16" over 48" wide, see "Steel Plates—Sheared".

SHEETS—HOT ROLLED

Prime Quality

U.S.S. Ga. & Size in Inches	Est. Wt. Per Sheet	Net Size Extra
No. 8 (.1644") Wt. per Sq. Ft. 6.875		
36x 96	165.0	Base
36x120	206.3	"
36x144	247.5	"
36x240	412.6	"
42x 96	N.Y. 192.5	"
42x120	N.Y. 240.6	"
42x144	N.Y. 288.8	"
42x240	N.Y. 481.2	"
48x 96	220.0	"
48x120	275.0	"
48x144	330.0	"
48x240	550.0	"
54x 96	N.Y. 247.5	.15
54x120	N.Y. 309.4	.15
54x240	N.Y. 618.8	.15
60x 96	275.0	.15
60x120	343.8	.15
60x144	412.5	.15
60x240	687.5	.15
72x 96	330.0	.25
72x120	412.5	.25
72x144	495.0	.25
72x240	825.0	.25
84x192	Clev. 770.0	.55
No. 10 (.1345") Wt. per Sq. Ft. 5.625		
24x 96	90.0	Base
24x120	112.5	"
26x 96	97.5	"
26x120	N.Y. 121.9	"
28x 96	105.0	"
28x120	N.Y. 131.3	"
30x 96	112.5	"
30x120	140.6	"
30x144	168.7	"
32x 96	120.0	"
34x 96	128.0	"
36x 96	135.0	"
36x120	168.8	"
36x144	202.5	"
38x 96	142.5	"
40x 96	150.0	"
40x120	187.5	"
42x 96	157.5	"
42x120	196.9	"
42x144	N.Y. 236.3	"
42x156	Det. 255.9	"
44x 96	165.0	"
No. 10 (.1345") Wt. per Sq. Ft. 5.625		
46x 96	173.0	Base
48x 96	180.0	"
48x120	225.0	"
48x144	270.0	"
54x 96	202.5	.15
54x120	N.Y. 253.1	.15
54x144	N.Y. 303.8	.15
60x 96	225.0	.15
60x120	281.3	.15
60x144	337.5	.15
60x168	N.Y. 393.8	.15
60x240	N.Y. 562.6	.15
66x144	371.25	.20
72x 96	270.0	.25
72x120	337.5	.25
72x144	405.0	.25
72x168	N.Y. 472.5	.25
72x240	675.0	.25
84x 96	315.0	.55
84x120	393.8	.55
84x144	472.5	.55
84x168	N.Y. 550.3	.55
84x240	787.5	.55
No. 11 (.1196") Wt. per Sq. Ft. 5.00		
24x 96	N.Y. 80.0	.05
24x120	N.Y. 100.0	.05
30x 96	N.Y. 100.0	.05
30x120	N.Y. 125.0	.05
36x 96	120.0	.05
36x120	150.0	.05
36x144	Bost. 180.0	.05
42x 96	140.0	.05
42x120	N.Y. 175.0	.05
48x 96	160.0	.05
48x120	200.0	.05
48x144	240.0	.05
54x 96	Bost. 180.0	.20
54x120	Bost. 225.0	.20
54x144	Bost. 270.0	.20
60x 96	200.0	.20
60x120	250.0	.20
60x144	300.0	.20
72x 96	Bost. 240.0	.30
72x120	N.Y. 300.0	.30
72x144	360.0	.30
72x156	Buff. 390.0	.30

(Continued)

Cutting extras in back of book.

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SHEETS—HOT ROLLED

Prime Quality

U.S.S. Ga. & Size in Inches	Est. Wt. Per Sheet	Net Size Extra
(Continued)		
No. 11(.1196") Wt. per Sq. Ft. 5.00		
72x168	N.Y. 420.0	.30
72x180	Bost. 450.0	.30
72x240	Bost. 600.0	.30
No. 12(.1046") Wt. per Sq. Ft. 4.375		
24x 96	70.0	.10
24x120	87.5	.10
26x 96	75.8	.10
28x 96	81.7	.10
28x120	102.1	.10
30x 96	87.5	.10
30x120	109.4	.10
32x 96	94.0	.10
34x 96	100.0	.10
36x 96	105.0	.10
36x120	131.3	.10
36x144	157.5	.10
38x 96	110.8	.10
40x 96	116.7	.10
40x120	145.8	.10
42x 96	122.5	.10
42x120	153.1	.10
42x144	N.Y. 183.8	.10
44x 96	130.0	.10
46x 96	136.0	.10
48x 96	140.0	.10
48x120	175.0	.10
48x144	210.0	.10
48x156	Chgo. 227.5	.10
52x120	196.8	.25
54x 96	157.5	.25
54x120	N.Y. 196.9	.25
54x144	N.Y. 236.3	.25
60x 96	175.0	.25
60x120	218.8	.25
60x144	262.5	.25
72x 96	210.0	.35
72x120	262.5	.35
72x144	315.0	.35
72x168	N.Y. 367.6	.35
72x240	525.2	.35
84x 96	245.0	.70
84x120	306.2	.70
84x144	367.5	.70
84x168	N.Y. 428.8	.70
84x240	612.4	.70
No. 13(.0897") Wt. per Sq. Ft. 3.75		
24x 96	60.0	.15
36x 96	90.0	.15
36x108	101.2	.15
36x144	135.0	.15
48x 96	120.0	.15
48x120	150.0	.15
48x144	180.0	.15
54x144	168.8	.30
60x 96	170.0	.30
60x120	187.5	.30
60x144	225.0	.30
No. 13(.0897") Wt. per Sq. Ft. 3.75		
72x144	270.0	.45
72x156	292.5	.45
No. 14(.0747") Wt. per Sq. Ft. 3.125		
24x 96	50.0	.20
24x120	62.5	.20
26x 96	54.2	.20
26x120	N.Y. 67.7	.20
28x 96	58.3	.20
28x120	N.Y. 72.9	.20
30x 96	62.5	.20
30x120	78.1	.20
32x 96	68.0	.20
34x 96	72.0	.20
36x 96	75.0	.20
36x120	93.8	.20
36x144	112.5	.20
38x 96	79.2	.20
40x 96	83.3	.20
40x120	104.2	.20
42x 96	87.5	.20
42x120	109.4	.20
42x144	Chgo. 131.3	.20
44x 96	94.0	.20
46x 96	98.0	.20
48x 96	100.0	.20
48x120	125.0	.20
48x144	150.0	.20
48x156	162.5	.20
54x 96	112.5	.35
54x120	N.Y. 140.6	.35
54x156	Chgo. 182.8	.35
60x 96	125.0	.35
60x120	156.3	.35
60x144	187.5	.35
60x156	Buff. 203.1	.35
60x168	Chgo. 218.8	.35
*72x120	187.5	1.50
*72x144	225.0	1.50
No. 16(.0598") Wt. per Sq. Ft. 2.50		
24x 96	40.0	.45
24x120	50.0	.45
24x144	60.0	.45
26x 96	43.3	.45
26x120	54.2	.45
28x 96	46.7	.45
28x120	N.Y. 58.3	.45
30x 96	50.0	.45
30x120	62.5	.45
32x 96	54.0	.45
34x 96	56.0	.45
36x 96	60.0	.45
36x120	75.0	.45
36x144	90.0	.45
38x 96	63.3	.45
40x 96	66.7	.45
40x120	83.3	.45
40x144	100.0	.45

(Continued)

* These sizes furnished Stretcher Leveled and resquared.

SHEETS—HOT ROLLED

Prime Quality

U.S.S. Ga. & Size in Inches	Est. Wt. Per Sheet	Net Extra for Size
(Continued)		
No. 16(.0598") Wt. per Sq. Ft. 2.50		
42x 96	70.0	.45
42x120	87.5	.45
42x144	Chgo. 105.0	.45
44x 96	73.0	.45
46x 96	76.0	.45
48x 96	80.0	.45
48x120	100.0	.45
48x144	120.0	.45
48x156	130.0	.45
54x 96	90.0	.50
54x108	101.2	.50
54x120	112.5	.50
54x144	N.Y. 135.0	.50
54x156	Chgo. 146.3	.50
60x 96	100.0	.50
60x120	125.0	.50
60x144	150.0	.50
60x168	Chgo.	.50
72x 96	120.0	.65
*72x120	150.0	2.00
*72x144	180.0	2.00
No. 18(.0478") Wt. per Sq. Ft. 2.00		
24x 96	32.0	.60
24x120	40.0	.60
26x 96	34.7	.60
28x 96	37.3	.60
28x120	46.7	.60
30x 96	40.0	.60
30x120	50.0	.60
36x 96	48.0	.60
36x120	60.0	.60
40x 96	53.3	.60
40x120	66.7	.60
42x 96	56.0	.60
42x120	70.0	.60
48x 96	64.0	.60
48x120	80.0	.60
No. 20(.0359") Wt. per Sq. Ft. 1.50		
20x 96	20.0	.80
24x 96	24.0	.80
24x120	30.0	.80
26x 96	26.0	.80
28x 72	21.0	.80
28x 84	24.5	.80
28x 96	28.0	.80
28x120	35.0	.80
30x 96	30.0	.80
30x120	37.5	.80
36x 72	27.0	.80
36x 96	36.0	.80
36x120	45.0	.80
42x 72	31.5	.80
42x 96	42.0	.80
42x120	52.5	.80
48x 72	36.0	.80
48x 96	48.0	.80
48x120	60.0	.80
48x144	N.Y. 72.0	.90
No. 22(.0299") Wt. per Sq. Ft. 1.25		
20x 96	16.7	.85
24x 96	20.0	.85
24x120	25.0	.85
26x 96	21.7	.85
28x 96	23.3	.85
30x 96	25.0	.85
30x120	31.3	.85
36x 96	30.0	.85
36x120	37.5	.85
42x 96	35.0	.95
42x120	43.8	.95
48x 96	40.0	1.05
48x120	50.0	1.05
No. 24(.0239") Wt. per Sq. Ft. 1.00		
24x 96	16.0	.90
24x120	20.0	.90
28x 96	18.7	.90
28x120	N.Y. 23.3	.90
30x 96	20.0	.90
30x120	25.0	.90
36x 96	24.0	.90
36x120	30.0	.90
42x 96	28.0	1.10
42x120	35.0	1.10
48x 96	32.0	1.20
48x120	40.0	1.20
No. 26(.0179") Wt. per Sq. Ft. .75		
24x 96	12.0	1.00
26x 96	13.0	1.00
28x 96	14.0	1.00
30x 96	15.0	1.00
30x120	18.8	1.00
36x 96	18.0	1.10
36x120	22.5	1.10
42x 96	21.0	1.40
42x120	26.3	1.40
No. 27(.0164") Wt. per Sq. Ft. .6875		
24x 96	11.0	1.05
30x 96	13.8	1.05
36x 96	16.5	1.20
42x 96	19.3	1.50
No. 28(.0149") Wt. per Sq. Ft. .625		
24x 96	10.0	1.10
28x 72	8.8	1.10
28x 84	10.2	1.10
28x 96	11.7	1.10
28x108	13.1	1.10
28x120	14.6	1.10
30x 96	12.5	1.10
30x120	15.6	1.10
36x 96	15.0	1.30
36x120	18.8	1.30
36x144	Buff. 22.5	1.30
40x 96	N.Y. 16.7	1.30
No. 30(.0120") Wt. per Sq. Ft. .50		
24x 96	8.0	1.40
30x 96	10.0	1.40
36x 96	N.Y. 12.0	1.50

* These sizes furnished Stretcher Leveled and resquared only.

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No. 7 (3/16") SHEETS—HOT ROLLED COPPER ALLOY

Prime Quality

Shipped from our New York Plant

Copper Alloy Steel is described in connection with Galvanized Copper Alloy Sheets and Copper Alloy Plates. The same high quality stock is used for Copper Alloy Hot Rolled Sheets. Minimum copper content .15.

Size in Inches	Weight Per Ft. Lbs.	Net Size & Quality Extra	Stock Lgths. Ft.	Size in Inches	Weight Per Ft. Lbs.	Net Size & Quality Extra	Stock Lgths. Ft.
No. 7 (3/16") Wt. per Sq. Ft. 7.50				No. 7 (3/16") Wt. per Sq. Ft. 7.50			
24	15.00	.25	30	42	26.25	.25	30
30	18.75	.25	30	48	30.00	.25	30
36	22.50	.25	30				

Above sizes subject to regular plate extras for cutting to length and width.

SHEETS—HOT ROLLED, COPPER ALLOY

Prime Quality

U.S.S. Ga. & Size in Inches	Est. Wt. Per Sheet	In Stock At	Size & Quality Extra	U.S.S. Ga. & Size In Inches	Est. Wt. Per Sheet	In Stock At	Size & Quality Extra
No. 8 (.1644") Wt. per Sq. Ft. 6.875				No. 10 (.1345") Wt. per Sq. Ft. 5.625			
30x 96	137.5	Chgo.	.25	60x120	281.3	Phil.	.40
30x120	171.9	"	.25	60x144	337.5	Buff.	.40
30x144	206.3	"	.25	60x156	365.6	Chgo.	.40
30x156	223.5	"	.25	72x120	337.5	"	.50
30x240	343.8	"	.25	72x156	438.7	"	.50
36x 96	165.0	Phil.	.25	72x240	675.0	N.Y.	.50
36x120	206.3	"	.25	No. 11 (.1196") Wt. per Sq. Ft. 5.00			
36x144	247.5	"	.25	36x 96	120.0	Phil.	.30
36x156	268.2	Chgo.	.25	36x120	150.0	"	.30
36x240	412.6	Phil.	.25	48x 96	160.0	"	.30
48x 96	220.0	"	.25	48x120	200.0	"	.30
48x120	275.0	"	.25	48x144	240.0	"	.30
48x144	330.0	"	.25	60x 96	200.0	"	.45
48x156	357.5	Chgo.	.25	60x120	250.0	"	.45
48x240	550.0	Phil.	.25	60x144	300.0	"	.45
60x 96	275.0	"	.40	72x144	360.0	"	.55
60x120	343.8	"	.40	No. 12 (.1046") Wt. per Sq. Ft. 4.375			
60x144	412.5	"	.40	24x 96	70.0	Phil.	.35
60x156	446.9	Chgo.	.40	24x120	87.5	"	.35
60x240	687.6	Phil.	.40	26x 96	75.8	"	.35
72x 96	330.0	"	.50	28x 96	81.7	"	.35
72x120	412.5	"	.50	30x 96	87.5	"	.35
72x144	495.0	"	.50	30x120	109.4	"	.35
72x156	536.2	Chgo.	.50	32x 96	94.0	"	.35
72x240	825.0	Phil.	.50	34x 96	100.0	"	.35
No. 10 (.1345") Wt. per Sq. Ft. 5.625				36x 96	105.0	"	.35
30x 96	112.5	N.Y.	.25	36x120	131.3	"	.35
30x120	140.6	"	.25	36x144	157.5	"	.35
36x 96	135.0	Phil.	.25	38x 96	110.8	"	.35
36x120	168.8	"	.25	40x 96	116.7	"	.35
42x 96	157.5	N.Y.	.25	42x 96	122.5	"	.35
42x120	196.9	"	.25	42x120	153.1	"	.35
48x 96	180.0	Phil.	.25	44x 96	130.0	"	.35
48x120	225.0	"	.25	46x 96	136.0	"	.35
48x144	270.0	"	.25	48x 96	140.0	"	.35
48x156	292.5	Chgo.	.25	48x120	175.0	"	.35
54x120	253.1	"	.40	48x144	210.0	"	.35
54x156	329.1	"	.40	48x156	227.5	Chgo.	.35
60x 96	225.0	Phil.	.40	52x120	196.8	"	.50

(Continued)

Cutting extras in back of book.

SHEETS—HOT ROLLED, COPPER ALLOY

Prime Quality

U.S.S. Ga. & Size in Inches	Est. Wt. Per Sheet	In Stock At	Size & Quality Extra
(Continued)			
No. 12 (.1046") Wt. per Sq. Ft. 4.375			
54x 96	157.5	Phil.	.50
54x120	196.9	Chgo.	.50
54x156	255.9	"	.50
60x 96	175.0	Phil.	.50
60x120	218.8	"	.50
60x144	262.5	"	.50
60x156	284.4	Chgo.	.50
72x144	315.0	"	.60
No. 14 (.0747") Wt. per Sq. Ft. 3.125			
24x 96	50.0	Chgo.	.45
24x120	62.5	"	.45
30x 96	62.5	"	.45
30x120	78.1	"	.45
36x 96	75.0	Phil.	.45
36x120	93.8	"	.45
42x 96	87.5	Chgo.	.45
42x120	109.4	"	.45
48x 96	100.0	N.Y.	.45
48x120	125.0	Phil.	.45
48x144	150.0	"	.45
48x156	162.5	Chgo.	.45
54x120	140.6	"	.60
54x156	182.8	"	.60
60x 96	125.0	N.Y.	.60
60x120	156.3	Phil.	.60
60x156	203.1	Chgo.	.60

U.S.S. Ga. & Size in Inches	Est. Wt. Per Sheet	In Stock At	Size & Quality Extra
No. 16 (.0598") Wt. per Sq. Ft. 2.50			
24x 96	40.0	Phil.	.70
24x120	50.0	Chgo.	.70
24x144	60.0	Phil.	.70
26x 96	43.3	"	.70
28x 96	46.7	"	.70
30x 96	50.0	"	.70
30x120	62.5	"	.70
32x 96	54.0	"	.70
34x 96	56.0	"	.70
36x 96	60.0	"	.70
36x120	75.0	"	.70
36x144	90.0	"	.70
38x 96	63.3	"	.70
40x 96	66.7	"	.70
42x 96	70.0	"	.70
42x120	87.5	"	.70
44x 96	73.0	"	.70
46x 96	76.0	"	.70
48x 96	80.0	"	.70
48x120	100.0	"	.70
48x144	120.0	"	.70
48x156	130.0	Chgo.	.70
54x 96	90.0	Phil.	.75
54x120	112.5	Chgo.	.75
54x156	146.3	"	.75
60x 96	100.0	Phil.	.75
60x120	125.0	"	.75
60x144	150.0	"	.75
60x156	162.5	Chgo.	.75
72x 96	120.0	Phil.	.90

HOT ROLLED, PICKLED AND OILED STRIP STEEL

Flat uniform color stock, free from scale. Rolled accurately to a decimal thickness, has uniform temper, and will not vary in thickness to the same extent as the ordinary hot rolled sheet. Suitable for die work and many stamping operations. Can be sheared to any width for small forming operations. Cut to 8, 16, 24 and 30 inch widths without charge.

Gauge	Max. Width Inches	Length, in Inches	Net Size Extra	In Stock At
.035	48	120	+.80	Chgo.
.049	48	120	+.60	Chgo.
.062	48	120	+.45	Chgo.
.065	48	120	+.45	Chgo.
.072	24½	96	+.20	Chgo.
.078	24½	96	+.20	Chgo.
.083	48	120	+.15	Chgo.
.095	48	120	+.15	Chgo.
.109	48	120	+.10	Chgo.
.120	48	120	+.05	Chgo.
.125	48	120	+.05	Chgo.
.134	48	120	Base	Chgo.
.156	30	96	"	Chgo.
.187	48	144	"	N.Y.

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No. 7 (3/16") SHEETS—HOT ROLLED .40 TO .50 CARBON

Prime Quality

Shipped from our New York Plant

Size in Inches	Wt. Per Ft. Lbs.	Net Size & Quality Extra	Stock Lgths. Ft.
No. 7(3/16") Wt. per Sq. Ft. 7.50			
24	15.00	.40	30
30	18.75	.40	30
36	22.50	.40	30
42	26.25	.40	30
48	30.00	.40	30

Above sizes subject to regular plate extras for cutting to length and width.

SHEETS—HOT ROLLED .40 TO .50 CARBON

Prime Quality

U.S.S. Ga. & Size in Inches	Est. Wt. per Sheet	Size & Quality Extra
No. 10(.1345") Wt. per Sq. Ft. 5.625		
24x 96	Chgo. 90.0	.60
24x120	Chgo. 112.5	.60
30x 96	Chgo. 112.5	.60
30x120	Chgo. 140.6	.60
36x 96	Chgo. 135.0	.60
36x120	Chgo. 168.8	.60
36x144	Chgo. 202.5	.60
42x 96	Chgo. 157.5	.60
42x120	Chgo. 196.9	.60
42x144	Chgo. 236.3	.60
48x 96	N.Y. 180.0	.60
48x120	N.Y. 225.0	.60
48x144	N.Y. 270.0	.60
48x240	Chgo. 450.0	.60
60x 96	Chgo. 225.0	.75
60x120	Chgo. 281.3	.75
60x144	Chgo. 337.5	.75
72x 96	Chgo. 270.0	.85
72x120	Chgo. 337.5	.85
72x144	N.Y. 405.0	.85
72x240	Det. 675.0	.85

U.S.S. Ga. & Size in Inches	Est. Wt. per Sheet	Size & Quality Extra
No. 12(.1046") Wt. per Sq. Ft. 4.375		
24x120	Chgo. 87.5	.70
30x 96	Chgo. 87.5	.70
30x120	Chgo. 109.4	.70
36x 96	Chgo. 105.0	.70
36x120	Chgo. 131.3	.70
42x120	Chgo. 153.1	.70
48x 96	N.Y. 140.0	.70
48x120	N.Y. 175.0	.70
48x240	N.Y. 350.0	.70
60x 96	Chgo. 175.0	.85
60x120	Chgo. 218.8	.85
60x144	Chgo. 262.5	.85
72x144	N.Y.315.0	.95
72x240	N.Y. 525.2	.95
No. 16(.0598") Wt. per Sq. Ft. 2.50		
24x120	Chgo. 50.0	1.05
36x108	Chgo. 67.5	1.05
48x120	N.Y. 100.0	1.05

Cutting extras in back of book.

ABRASION RESISTING SHEETS

See Plate Section

INLAND HI-STEEL SHEETS

See Hi-Steel Section

STEEL SHEETS—GALVANIZED

Inland Prime Quality

Inland Prime Quality Galvanized Sheets are produced by the most advanced methods. They represent the highest quality of Galvanizing that it is possible to produce.

Galv. Sheet Ga. & Size in Inches	Est. Wt. Per Sheet	Net Extra for Size	Sheets per Bdl.
No. 10.....Wt. per Sq. Ft. 5.781			
24x 96	92.5	—.50	N.Y.
30x 96	115.6	—.50	..
30x120	144.5	—.50	N.Y.
36x 96	138.8	—.50	..
36x120	173.4	—.50	..
42x 96	161.8	—.45	N.Y.
42x120	202.3	—.45	N.Y.
48x 96	185.0	—.30	..
48x120	231.2	—.30	..
No. 11.....Wt. per Sq. Ft. 5.156			
30x 96	103.0	—.45	Bost.
36x 96	123.8	—.45	"
36x120	154.7	—.45	"
48x 96	165.0	+.05	"
No. 12.....Wt. per Sq. Ft. 4.531			
24x 96	72.5	—.40	2
30x 96	90.6	—.40	..
30x120	113.3	—.40	N.Y.
36x 96	108.8	—.40	..
36x120	135.9	—.40	..
42x 96	126.8	—.35	..
42x120	158.7	—.35	..
48x 96	145.0	—.20	..
48x120	181.2	—.20	..
No. 14.....Wt. per Sq. Ft. 3.281			
24x 96	52.5	—.30	3
24x120	65.6	—.30	N.Y.
30x 96	65.6	—.30	2
30x120	82.0	—.30	2
36x 96	78.8	—.30	2
36x120	98.4	—.30	..
42x 96	91.9	—.25	..
42x120	114.8	—.25	..
48x 96	105.0	—.10	..
48x120	131.2	—.10	..
No. 16.....Wt. per Sq. Ft. 2.656			
24x 96	42.5	—.25	4
24x120	53.1	—.25	3
26x 96	46.0	—.25	3
26x120	57.5	—.25	3
28x 96	49.5	—.25	N.Y.
28x120	62.0	—.25	N.Y.
30x 96	53.1	—.25	3
30x120	66.4	—.25	2
36x 96	63.8	—.25	2
36x120	79.7	—.25	2

Galv. Sheet Ga. & Size in Inches	Est. Wt. per Sheet	Net Extra for Size	Sheets per Bdl.
No. 16.....Wt. per Sq. Ft. 2.656			
42x 96	74.4	—.20	2
42x120	93.0	—.20	..
48x 96	85.0	—.05	..
48x120	106.2	—.05	..
No. 18.....Wt. per Sq. Ft. 2.156			
24x 96	34.5	—.15	4
24x120	43.1	—.15	N.Y.
28x 72	30.2	—.15	Chgo.
28x 84	35.2	—.15	Chgo.
28x 96	40.2	—.15	4
28x108	45.3	—.15	Chgo.
28x120	50.3	—.15	N.Y.
30x 96	43.1	—.15	4
30x120	53.9	—.15	3
36x 96	51.8	—.15	3
36x120	64.7	—.15	2
36x144	77.6	—.05	N.Y.
42x 96	60.4	—.10	3
42x120	75.5	—.10	2
48x 96	69.0	+.10	2
48x120	86.2	+.10	2
No. 20.....Wt. per Sq. Ft. 1.656			
24x 96	26.5	—.10	6
24x120	33.1	—.10	5
26x 96	28.7	—.10	5
26x120	35.9	—.10	Chgo.
28x 72	23.2	—.10	N.Y.
28x 84	27.1	—.10	N.Y.
28x 96	30.9	—.10	5
28x108	34.8	—.10	N.Y.
28x120	38.6	—.10	4
28x144	46.4	Base	Chgo.
30x 72	24.8	—.10	6
30x 84	29.0	—.10	5
30x 96	33.1	—.10	5
30x108	37.3	—.10	4
30x120	41.4	—.10	4
30x144	49.6	Base	3
36x 96	39.8	—.10	4
36x120	49.7	—.10	3
42x 96	46.0	+.05	4
42x120	58.0	+.05	3
48x 96	53.0	+.30	3
48x120	66.2	+.30	3

(Continued)

When cutting galvanized sheets to special sizes we will, unless advised to the contrary, retain all waste accumulating in shearing. No allowance for scrap.

Cutting extras in back of book.

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STEEL SHEETS—GALVANIZED

Inland Prime Quality

Galv. Sheet Ga. & Size in Inches	Est. Wt. per Sheet	Net Size Extra	Shts. per Bdl.
(Continued)			
No. 22.....Wt. per Sq. Ft. 1.406			
24x 96	22.5	—.05	7
24x120	28.1	—.05	5
26x 96	24.4	—.05	6
28x 72	19.7	—.05	N.Y.
28x 84	23.0	—.05	N.Y.
28x 96	26.2	—.05	6
28x108	29.5	—.05	5
28x120	32.8	—.05	5
28x144	39.4	+.05	Chgo.
30x 72	21.1	—.05	7
30x 84	24.6	—.05	6
30x 96	28.1	—.05	5
30x108	31.6	—.05	5
30x120	35.2	—.05	4
30x144	42.2	+.05	..
36x 72	25.3	—.05	N.Y.
36x 84	29.6	—.05	N.Y.
36x 96	33.8	—.05	5
36x120	42.2	—.05	4
42x 96	39.4	+.30	4
42x120	49.2	+.30	3
48x 96	45.0	+.60	3
48x120	56.2	+.60	3
No. 24.....Wt. per Sq. Ft. 1.156			
24x 96	18.5	Base	8
24x120	23.1	"	7
26x 96	20.0	"	8
28x 72	16.2	"	N.Y.
28x 84	18.9	"	N.Y.
28x 96	21.6	"	7
28x108	24.3	"	N.Y.
28x120	27.0	"	6
28x144	32.4	+.10	Chgo.
30x 72	17.3	Base	9
30x 84	20.2	"	7
30x 96	23.1	"	7
30x108	25.9	"	6
30x120	28.9	"	5
30x144	34.7	+.10	..
36x 72	20.8	Base	N.Y.
36x 96	27.8	"	6
36x120	34.7	"	5
36x144	41.6	+.10	N.Y.
42x 96	32.4	+.45	5
42x120	40.5	+.45	4
48x 96	37.0	+.75	..
48x120	46.2	+.75	..
No. 26.....Wt. per Sq. Ft. .906			
24x 96	14.5	+.25	10
24x120	18.1	+.25	8
26x 96	15.7	+.25	10
26x120	19.6	+.25	N.Y.
28x 72	12.7	+.25	N.Y.
28x 84	14.8	+.25	N.Y.
28x 96	16.9	+.25	9
28x108	19.0	+.25	N.Y.
28x120	21.1	+.25	7
28x144	25.4	+.35	Chgo.
30x 72	13.6	+.25	11
30x 84	15.9	+.25	10
30x 96	18.1	+.25	8
30x108	20.2	+.25	7
30x120	22.7	+.25	7
30x132	24.9	+.35	6
30x144	27.3	+.35	..
36x 72	16.3	+.25	N.Y.
36x 96	21.8	+.25	7
36x120	27.2	+.25	6
42x 96	25.4	+.90	6
42x120	31.7	+.90	5
48x 96	29.0	+1.25	5
48x120	36.2	+1.25	4
No. 27.....Wt. per Sq. Ft. .843			
24x 96	13.5	+.35	11
26x 96	14.6	+.35	10
28x 96	15.7	+.35	10
30x 96	16.9	+.35	9
30x120	21.1	+.35	7
36x 96	20.2	+.40	8
36x120	25.3	+.40	6
No. 28.....Wt. per Sq. Ft. .781			
24x 96	12.5	+.50	12
24x120	15.6	+.50	10
26x 96	13.5	+.50	11
26x120	16.9	+.50	Chgo.
28x 72	10.9	+.50	N.Y.
28x 84	12.8	+.50	N.Y.
28x 96	14.6	+.50	10
28x108	16.4	+.50	N.Y.
28x120	18.2	+.50	N.Y.
28x144	21.8	+.60	Chgo.
30x 96	15.6	+.50	10
30x120	19.5	+.50	8
30x144	23.4	+.60	Chgo.
36x 72	14.1	+.70	N.Y.
36x 96	18.8	+.70	8
36x120	23.4	+.70	7
No. 29.....Wt. per Sq. Ft. .719			
30x 96	14.4	+.75	10
No. 30.....Wt. per Sq. Ft. .656			
24x 96	10.5	+1.00	N.Y.
24x120	13.1	+1.00	N.Y.
28x 96	12.3	+1.00	11
30x 72	9.8	+1.00	N.Y.
30x 96	13.1	+1.00	11
30x120	16.4	+1.00	N.Y.
32x 96	14.0	+1.00	11
36x 96	15.8	+1.20	10
36x120	19.7	+1.20	N.Y.

When cutting galvanized sheets to special sizes we will, unless advised to the contrary, retain all waste accumulating in shearing. No allowance for scrap.

Cutting extras in back of book.

COPPER ALLOY SHEETS—GALVANIZED

Inland Prime Quality

Copper Alloy steel has greater corrosion resistance than ordinary steel. The copper element counteracts sulphur oxides in steel and in the air, and thus counteracts or retards their corrosive effects.

This is the highest quality Copper Alloy Sheet. These are galvanized by the most modern methods used for roofing, siding, gutters, downspouts, and a wide range of everyday applications in which a high quality long life sheet is required. Minimum copper content .15.

Galv. Sheet Ga. & Size in Inches	Est. Wt. per Sheet	Size & Quality Extra
No. 10.....	Wt. per Sq. Ft. 5.781	
30x 96	N.Y. 115.6	— .25
30x120	N.Y. 144.5	— .25
36x 96	138.8	— .25
36x120	Buff. 173.4	— .25
42x 96	Buff. 161.8	— .20
42x120	Buff. 202.3	— .20
48x 96	185.0	— .05
48x120	231.2	— .05
No. 12.....	Wt. per Sq. Ft. 4.531	
30x 96	90.6	— .15
30x120	Chgo. 113.3	— .15
36x 96	108.8	— .15
36x120	Buff. 135.9	— .15
42x 96	126.8	— .10
42x120	Buff. 158.7	— .10
48x 96	145.0	+ .05
48x120	181.2	+ .05
No. 14.....	Wt. per Sq. Ft. 3.281	
30x 96	65.6	— .05
30x120	Buff. 82.0	— .05
36x 96	78.8	— .05
36x120	98.4	— .05
42x 96	Buff. 91.9	Base
42x120	Buff. 114.8	"
48x 96	105.0	+ .15
48x120	131.2	+ .15
No. 16.....	Wt. per Sq. Ft. 2.656	
24x 96	N.Y. 42.5	Base
24x120	N.Y. 53.1	"
28x 96	Buff. 49.5	"
28x120	Buff. 62.0	"
30x 96	53.1	"
30x120	66.4	"
36x 96	63.8	"
36x120	66.4	"
42x 96	Buff. 74.4	+ .05
42x120	Buff. 93.0	+ .05
48x 96	85.0	+ .20
48x120	106.2	+ .20
No. 18.....	Wt. per Sq. Ft. 2.156	
24x 96	N.Y. 34.5	+ .10
24x120	Buff. 43.1	+ .10
28x 72	Chgo. 30.2	+ .10
28x 84	Chgo. 35.2	+ .10

Galv. Sheet Ga. & Size in Inches	Est. Wt. per Sheet	Size & Quality Extra
No. 18.....	Wt. per Sq. Ft. 2.156	
28x 96	Buff. 40.2	+ .10
28x108	Chgo. 45.3	+ .10
28x120	Buff. 50.3	+ .10
30x 96	43.1	+ .10
30x120	53.9	+ .10
36x 96	51.8	+ .10
36x120	64.7	+ .10
42x 96	N.Y. 60.4	+ .15
42x120	Buff. 75.5	+ .15
48x 96	69.0	+ .35
48x120	86.2	+ .35
No. 20.....	Wt. per Sq. Ft. 1.656	
24x 96	26.5	+ .15
24x120	Buff. 33.1	+ .15
26x 96	Buff. 28.7	+ .15
28x 72	23.2	+ .15
28x 84	Chgo. 27.1	+ .15
28x 96	Buff. 30.9	+ .15
28x108	Chgo. 34.8	+ .15
28x120	Buff. 38.6	+ .15
28x144	Chgo. 46.4	+ .25
30x 72	N.Y. 24.8	+ .15
30x 84	N.Y. 29.0	+ .15
30x 96	33.1	+ .15
30x108	N.Y. 37.3	+ .15
30x120	41.4	+ .15
30x144	N.Y. 49.6	+ .25
36x 96	39.8	+ .15
36x120	49.7	+ .15
42x 96	N.Y. 46.4	+ .30
42x120	Buff. 58.0	+ .30
48x 96	53.0	+ .55
48x120	66.2	+ .55
No. 22.....	Wt. per Sq. Ft. 1.406	
24x 96	22.5	+ .20
24x120	Buff. 28.1	+ .20
26x 96	Buff. 24.4	+ .20
28x 72	Chgo. 19.7	+ .20
28x 84	Chgo. 23.0	+ .20
28x 96	N.Y. 26.2	+ .20
28x108	Chgo. 29.5	+ .20
28x120	Buff. 32.8	+ .20
28x144	Chgo. 39.4	+ .30

(Continued)

No scrap allowance on Galvanized Sheets cut to special sizes. Waste retained unless advised to the contrary.

Cutting extras in back of book.

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Rod 213
Bolt Reir 22
Data 243

COPPER ALLOY SHEETS—GALVANIZED

Inland Prime Quality

Galv. Sheet Ga. & Size in Inches	Est. Wt. per Sheet	Size & Quality Extra
(Continued)		
No. 22.....Wt. per Sq. Ft. 1.406		
30x 72	21.1	+ .20
30x 84	24.6	+ .20
30x 96	28.1	+ .20
30x108	31.6	+ .20
30x120	35.2	+ .20
30x144	42.2	+ .30
36x 96	33.8	+ .20
36x120	42.2	+ .20
42x 96	N.Y. 39.4	+ .55
42x120	Buff. 49.2	+ .55
48x 96	45.0	+ .85
48x120	56.2	+ .85
No. 24.....Wt. per Sq. Ft. 1.156		
24x 96	18.5	+ .25
24x120	Chgo. 23.1	+ .25
26x 96	Buff. 20.0	+ .25
28x 72	Chgo. 16.2	+ .25
28x 84	Chgo. 18.9	+ .25
28x 96	Buff. 21.6	+ .25
28x108	Chgo. 24.3	+ .25
28x120	Buff. 27.0	+ .25
28x144	Chgo. 32.4	+ .35
30x 72	17.3	+ .25
30x 84	20.2	+ .25
30x 96	23.1	+ .25
30x108	26.0	+ .25
30x120	28.9	+ .25
30x144	34.6	+ .35
36x 96	27.8	+ .25
36x120	34.7	+ .25
42x 96	Buff. 32.4	+ .70
42x120	Buff. 40.5	+ .70
48x 96	37.0	+1.00
48x120	46.2	+1.00
No. 26.....Wt. per Sq. Ft. .906		
24x 96	14.5	+ .50
24x120	Chgo. 18.1	+ .50
26x 96	Buff. 15.7	+ .50
28x 72	Chgo. 12.7	+ .50
28x 84	Chgo. 14.8	+ .50
28x 96	Buff. 16.9	+ .50
28x108	Chgo. 19.0	+ .50
28x120	Buff. 21.1	+ .50
30x 72	13.6	+ .50
30x 84	15.8	+ .50
30x 96	18.1	+ .50
30x108	20.4	+ .50
30x120	22.7	+ .50
30x144	27.2	+ .60
36x 96	21.8	+ .50
36x120	27.2	+ .50
42x 96	25.4	+1.15
42x120	Buff. 31.7	+1.15
No. 27.....Wt. per Sq. Ft. .843		
36x 96	20.3	+ .65
No. 28.....Wt. per Sq. Ft. .781		
24x 96	12.5	+ .75
24x120	Buff. 15.6	+ .75
26x 96	Buff. 13.5	+ .75
28x 96	Buff. 14.6	+ .75
28x120	Buff. 18.2	+ .75
30x 96	15.6	+ .75
30x120	Buff. 19.5	+ .75
36x 96	18.7	+ .95
36x120	Buff. 23.4	+ .95
No. 30.....Wt. per Sq. Ft. .656		
24x 96	Buff. 10.5	+1.25
30x 96	Buff. 13.1	+1.25
30x120	Buff. 16.4	+1.25

No scrap allowance on Galvanized Sheets cut to special sizes. Waste retained unless advised to the contrary.

Cutting extras in back of book.

LOCOMOTIVE JACKET STEEL

Special sheets are carried in stock to supply railroad needs for Locomotive Jacket Steel. For description and sizes see:

Cold Rolled Sheets.

Cold Rolled Deep Drawing Sheets.

Hot Rolled Sheets.

Uniform Blue Sheets.

STAINLESS STEEL SHEETS

See Stainless Steel Section

TOOL STEEL SHEETS

See Tool Steel Section

ARMCO INGOT IRON SHEETS—GALVANIZED

Prime Quality

Galv. Sheet Ga. & Size in Inches	Est. Wt. per Sheet	Net Extra for Size	Sheets per Bdl.
No. 10.....Wt. per Sq. Ft. 5.781			
36x 96	138.75	—.50	1
36x120	173.44	—.50	1
48x 96	185.00	—.30	1
48x120	231.20	—.30	1
No. 12.....Wt. per Sq. Ft. 4.531			
30x 96	90.62	—.40	2
36x 96	108.75	—.40	1
36x120	135.94	—.40	1
48x 96	145.00	—.20	1
48x120	181.24	—.20	1
No. 14.....Wt. per Sq. Ft. 3.281			
30x 96	65.52	—.30	2
30x120	82.00	—.30	N.Y.
36x 96	78.75	—.30	2
36x120	98.40	—.30	2
48x 96	105.00	—.10	1
48x120	131.20	—.10	1
No. 16.....Wt. per Sq. Ft. 2.656			
24x 96	42.50	—.25	4
30x 96	53.12	—.25	3
30x120	66.40	—.25	2
36x 96	63.75	—.25	2
36x120	76.69	—.25	2
48x 96	85.00	—.05	2
48x120	106.24	—.05	1
No. 18.....Wt. per Sq. Ft. 2.156			
24x 96	34.50	—.15	4
28x 96	40.20	—.15	Chgo.
28x120	50.30	—.15	"
30x 96	43.12	—.15	4
30x120	53.91	—.15	3
36x 96	51.75	—.15	3
36x120	64.70	—.15	2
48x 96	69.00	+.10	2
48x120	86.20	+.10	2
No. 20.....Wt. per Sq. Ft. 1.656			
24x 96	26.50	—.10	6
24x120	33.00	—.10	N.Y.
28x 96	30.90	—.10	Chgo.
28x120	38.60	—.10	"
30x 96	33.12	—.10	5
30x120	41.41	—.10	4
36x 96	39.75	—.10	4
36x120	49.69	—.10	3
42x 96	46.40	+.05	N.Y.
48x 96	53.00	+.30	3
48x120	66.20	+.30	2

Galv. Sheet Ga. & Size in Inches	Est. Wt. per Sheet	Net Extra for Size	Sheets per Bdl.
No. 22.....Wt. per Sq. Ft. 1.406			
24x 96	22.50	—.05	7
24x120	28.1	—.05	N.Y.
28x 96	26.20	—.05	Chgo.
28x120	32.80	—.05	"
30x 72	21.09	—.05	7
30x 84	24.61	—.05	6
30x 96	28.12	—.05	5
30x108	31.50	—.05	5
30x120	35.16	—.05	4
30x144	42.18	+.05	4
36x 96	33.75	—.05	5
36x120	42.19	—.05	4
42x 96	93.40	+.30	N.Y.
48x 96	45.00	+.60	3
48x120	56.20	+.60	3
No. 24.....Wt. per Sq. Ft. 1.156			
24x 96	18.50	Base	8
24x120	23.10	"	Chgo.
28x 96	21.60	"	"
28x120	27.00	"	"
30x 72	17.34	"	9
30x 84	20.23	"	7
30x 96	23.12	"	7
30x108	25.88	"	6
30x120	28.91	"	5
30x144	34.68	+.10	4
36x 96	27.75	Base	6
36x120	34.69	"	5
48x 96	37.00	+.75	4
48x120	46.20	+.75	3
No. 26.....Wt. per Sq. Ft. .906			
24x 96	14.50	+.25	10
28x 96	16.90	+.25	Chgo.
28x120	21.10	+.25	"
30x 72	13.59	+.25	11
30x 84	15.86	+.25	10
30x 96	18.12	+.25	8
30x108	20.25	+.25	7
30x120	22.66	+.25	7
36x 96	21.75	+.25	7
36x120	27.19	+.25	6
No. 27.....Wt. per Sq. Ft. .843			
24x 96	13.50	+.35	11
30x 96	16.87	+.35	9
36x 96	20.25	+.40	8
No. 28.....Wt. per Sq. Ft. .781			
24x 96	12.50	+.50	12
28x120	18.20	+.50	Chgo.
30x 96	15.62	+.50	10
30x120	19.50	+.50	8
36x 96	18.75	+.70	8

No scrap allowance on Galvanized Sheets cut to special sizes. Waste retained unless advised to the contrary.

Spec. Sheets 157
Stainless 167
Tubing 189
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...eldinr Rod 213
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C...

ARMCO INGOT IRON SHEETS AND PLATES

Hot Rolled—Prime Quality

U.S.S. Ga. & Size in Inches	Est. Wt. Per Piece	Net Extra for Size
1/2		
*72x240	N.Y. 2448.0	Base
3/8		
*72x240	N.Y. 1836.0	Base
1/4		
*36x 96	N.Y. 244.7	Base
*36x120	305.9	"
*36x144	N.Y. 367.0	"
*36x240	N.Y. 612.0	"
*48x 96	333.0	"
*48x120	408.0	"
*48x144	489.6	"
*48x240	816.0	"
*60x 96	417.0	"
*60x120	510.0	"
*60x144	613.0	"
*60x240	1020.0	"
*72x 96	N.Y. 489.6	"
*72x120	N.Y. 612.0	"
*72x144	N.Y. 734.4	"
*72x240	N.Y. 1224.0	"
No. 7(3/16") Wt. per Sq. Ft.		7.50
*36x 96	N.Y. 180.0	.20
*36x120	225.0	.20
*36x144	N.Y. 270.0	.20
*36x240	N.Y. 450.0	.20
*48x 96	240.0	.20
*48x120	300.0	.20
*48x144	360.0	.20
*48x240	600.0	.20
3/16		
*60x 96	312.0	.20
*60x120	382.5	.20
*60x144	458.0	.20
*60x240	765.0	.20
*72x 96	367.2	.20
*72x120	459.0	.20
*72x144	550.8	.20
*72x240	918.0	.20
No. 8(.1644") Wt. per Sq. Ft.		6.875
36x144	Chgo. 247.5	Base
48x 96	Chgo. 220.0	"
48x144	Chgo. 330.0	"
60x 96	Chgo. 275.0	.15
60x144	Chgo. 412.5	.15
No. 10(.01345") Wt. per Sq. Ft.		5.625
24x 96	90.0	Base
30x 96	113.0	"
36x 96	135.0	"
36x120	168.8	"
48x 96	180.0	"
48x120	225.0	"
48x156	Chgo. 292.5	"

U.S.S. Ga. & Size in Inches	Est. Wt. Per Piece	Net Extra for Size
No. 10(.1345") Wt. per Sq. Ft.		5.625
60x120	N.Y. 281.3	.15
60x156	Chgo. 365.6	.15
No. 12(.1046") Wt. per Sq. Ft.		4.375
24x 96	70.0	.10
30x 96	88.0	.10
36x 96	105.0	.10
36x120	131.3	.10
48x 96	140.0	.10
48x120	175.0	.10
48x144	210.0	.10
48x156	Chgo. 227.5	.10
60x120	N.Y. 218.8	.25
60x156	Chgo. 284.4	.25
No. 14(.0747") Wt. per Sq. Ft.		3.125
24x 96	50.0	.20
30x 96	63.0	.20
36x 96	75.0	.20
36x120	93.8	.20
48x 96	100.0	.20
48x120	125.0	.20
48x156	Chgo. 162.5	.20
60x120	N.Y. 156.3	.35
60x156	Chgo. 203.1	.35
No. 16(.0598") Wt. per Sq. Ft.		2.50
24x 96	40.0	.45
30x 96	50.0	.45
36x 96	60.0	.45
36x120	75.0	.45
48x 96	80.0	.45
48x120	100.0	.45
48x156	Chgo. 130.0	.45
60x120	N.Y. 125.0	.50
60x156	Chgo. 162.5	.50
No. 18(.0478") Wt. per Sq. Ft.		2.00
30x 96	40.0	.60
36x 96	48.0	.60
36x120	N.Y. 60.0	.60
48x120	N.Y. 80.0	.60
No. 20(.0359") Wt. per Sq. Ft.		1.50
30x 96	30.0	.80
36x 96	36.0	.80
No. 22(.0299") Wt. per Sq. Ft.		1.25
30x 96	25.0	.85
36x 96	30.0	.85
No. 24(.0239") Wt. per Sq. Ft.		1.00
30x 96	20.0	.90
36x 96	24.0	.90
No. 26(.0179") Wt. per Sq. Ft.		.75
30x 96	15.0	1.00
36x 96	18.0	1.10

* These are plates and are priced accordingly.

No scrap allowance on Galvanized Sheets cut to special sizes. Waste retained unless advised to the contrary.

Cutting extras in back of book.

GALVANNEALED STEEL SHEETS

Coated with a non-flaking zinc by a special process which makes the zinc a definite part of the steel sheet and eliminates flaking or peeling when sheets are formed or fabricated.

May be formed with dies or handled in brakes without injury to the coating. Paint and lacquer readily adheres to these sheets without weathering. Can be soldered or spot welded. They will also withstand high temperatures without injury to the coating better than standard galvanized sheets.

Particularly suited for all types of difficult forming, bending and fabricating work, sign boards and formed products such as mouldings, corner beads, sash, columns, etc.

Galv. Sheet Ga. & Size in Inches	Est. Wt. per Sheet	Size & Quality Extra	Sheets per Bdl.
No. 12.....Wt. per Sq. Ft. 4.531			
30x 96	90.6	— .40	Buff.
*48x 96	145.0	+ .20	"
*48x120	181.2	+ .20	N.Y.
No. 14.....Wt. per Sq. Ft. 3.281			
30x 96	65.6	— .30	N.Y.
30x120	82.0	— .30	2
36x 96	78.8	— .30	N.Y.
36x120	98.4	— .30	"
*48x120	131.2	+ .30	"
No. 16.....Wt. per Sq. Ft. 2.656			
30x 96	53.1	— .25	3
30x120	66.4	— .25	N.Y.
36x 96	63.8	— .25	2
36x120	79.7	— .25	2
*36x144	96.5	+ .15	Chgo.
*42x144	111.5	+ .20	"
*48x 96	85.1	+ .35	N.Y.
*48x120	106.3	+ .35	..
No. 18.....Wt. per Sq. Ft. 2.156			
24x 96	34.5	— .15	4
24x120	43.1	— .15	N.Y.
30x 96	43.1	— .15	4
30x120	53.9	— .15	3
36x 96	51.8	— .15	3
36x120	64.7	— .15	2
*48x 96	69.0	+ .50	2
*48x120	86.2	+ .50	2
*48x144	103.6	+ .60	Chgo.
No. 20.....Wt. per Sq. Ft. 1.656			
24x 96	26.5	— .10	6
30x 96	33.1	— .10	5
30x120	41.4	— .10	4
36x 96	39.8	— .10	4
36x120	49.7	— .10	3
*42x144	69.5	+ .55	Buff.
*48x 96	53.0	+ .70	3
*48x120	66.2	+ .70	2
*48x144	79.5	+ .80	2

Galv. Sheet Ga. & Size in Inches	Est. Wt. per Sheet	Size & Quality Extra	Sheets per Pdl.
No. 22.....Wt. per Sq. Ft. 1.406			
24x 96	22.5	— .05	7
30x 96	28.1	— .05	5
30x120	35.2	— .05	4
36x 96	33.8	— .05	5
36x120	42.2	— .05	4
*42x 96	39.4	+ .70	3
*48x 96	45.0	+1.00	3
*48x120	56.2	+1.00	3
*48x144	67.6	+1.10	Chgo.
No. 24.....Wt. per Sq. Ft. 1.156			
24x 96	18.5	Base	8
30x 96	23.1	"	7
30x120	28.9	"	5
36x 96	27.8	"	6
36x120	34.7	"	5
*42x 96	32.4	+ .85	N.Y.
*42x120	40.5	+ .85	Chgo.
*48x 96	37.0	+1.15	4
*48x120	46.2	+1.15	3
*48x144	55.4	+1.25	Buff.
No. 26.....Wt. per Sq. Ft. .906			
24x 96	14.5	+ .25	10
30x 96	18.1	+ .25	8
30x120	22.7	+ .25	7
36x 96	21.8	+ .25	7
36x120	27.2	+ .25	6
36x144	32.6	+ .35	Chgo.
*42x 96	25.4	+1.30	"
*42x120	31.7	+1.30	"
*42x144	38.0	+1.40	"
*48x 96	29.0	+1.65	5
*48x120	36.3	+1.65	Chgo
No. 28.....Wt. per Sq. Ft. .781			
24x 96	12.5	+ .50	12
30x 96	15.6	+ .50	10
30x120	19.5	+ .50	8
36x 96	18.8	+ .70	8
36x120	23.4	+ .70	7
No. 30.....Wt. per Sq. Ft. .65			
30x 96	13.1	+1.00	11

* These sizes are stretcher leveled.

Sheets 42" and wider are Stretcher Leveled and will have gripper marks. The 40c extra for stretcher leveling is included in above size and quality extras. If resquared sheets are required, add 12½% t net price per 100 lbs.

No scrap allowance on Galvannealed Sheets cut to special sizes Waste retained unless advised to the contrary.

Cutting extras in back of book.

Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbit 203
Welding Rod 213
Bolt Reir 22
Data 243
C

CORRUGATED ROOFING & SIDING DATA

Many of the following full weight, prime quality grades and sizes can be furnished promptly from stock.

Steel—Armco—Copper Bearing—Galvanized
Red Painted—Plain Black

U.S.S. Ga. & Size in Inches	Est. Wt. Per Sheet Lbs.	No. Sheets Per Square (100 Sq. Ft.)	Est. Wt. Per Square
No. 16x26 x 60	31.0	9.232	286
26 x 96	49.6	5.769	286
26 x120	62.0	4.616	286
27½x 60	33.2	8.728	290
27½x 96	53.1	5.455	290
27½x120	66.4	4.364	290
No. 18x26 x 60	25.2	9.232	232
26 x 96	40.2	5.769	232
26 x120	50.3	4.616	232
27½x 60	26.9	8.728	236
27½x 96	43.1	5.455	236
27½x120	53.9	4.364	236
No. 20x26 x 60	19.3	9.232	178
26 x 72	23.2	7.692	178
26 x 84	27.1	6.593	178
26 x 96	30.9	5.769	178
26 x108	34.8	5.128	178
26 x120	38.6	4.616	178
27½x 60	20.7	8.728	181
27½x 72	24.8	7.273	181
27½x 84	29.0	6.234	181
27½x 96	33.1	5.455	181
27½x108	37.3	4.848	181
27½x120	41.4	4.364	181
27½x144	49.6	3.636	181
No. 22x26 x 60	16.4	9.232	151
26 x 72	19.7	7.692	151
26 x 84	23.0	6.593	151
26 x 96	26.2	5.769	151
26 x108	29.5	5.128	151
26 x120	32.8	4.616	151
27½x 60	17.6	8.728	153
27½x 72	21.1	7.273	153
27½x 84	24.6	6.234	153
27½x 96	28.1	5.455	153
27½x108	31.6	4.848	153
27½x120	35.2	4.364	153
27½x144	42.2	3.636	153
No. 24x26 x 60	13.5	9.232	125
26 x 72	16.2	7.692	125
26 x 84	18.9	6.593	125
26 x 96	21.6	5.769	125
26 x108	24.3	5.128	125
26 x120	27.0	4.616	125

(Continued)

A square as shown in the above table consists of 100 sq. ft. of sheet steel after corrugating but before laying, and does not include allowance for side and end laps.

The approximate allowance for side and end laps for standard roofing is 20% to 25% and for siding 12% to 18% of the area to be covered. The standard is one and one half corrugation lap on the side and 6" on the end for roofing 27½" wide and one corrugation lap on the side and 4" on the end for siding 26" wide, both with a net covering width of 24".

We can also supply sheets No. 20 gauge and lighter with standard 1¼" corrugations. Our facilities enable us to corrugate sheets in special widths up to 36", or lengths up to 12 ft. with either 1¼" or 2½" corrugations.

CORRUGATED ROOFING & SIDING DATA

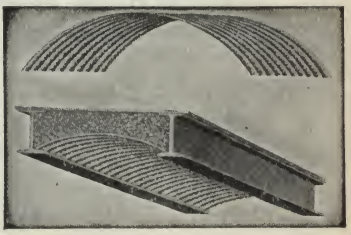
U. S. S. Ga. & Size in Inches	Est. Wt. Per Sheet Lbs.	No. Sheets Per Square (100 Sq. Ft.)	Est. Wt. Per Square
(Continued)			
No. 24x27½x 60	14.5	8.728	126
27½x 72	17.3	7.273	126
27½x 84	20.2	6.234	126
27½x 96	23.1	5.455	126
27½x108	26.0	4.848	126
27½x120	28.9	4.364	126
27½x144	34.6	3.636	126
No. 26x26 x 60	10.5	9.232	98
26 x 72	12.7	7.692	98
26 x 84	14.8	6.593	98
26 x 96	16.9	5.769	98
26 x108	19.0	5.128	98
26 x120	21.1	4.616	98
27½x 60	11.4	8.728	99
27½x 72	13.6	7.273	99
27½x 84	15.9	6.234	99
27½x 96	18.1	5.455	99
27½x108	20.4	4.848	99
27½x120	22.7	4.364	99
27½x144	27.2	3.636	99
No. 28x26 x 60	9.1	9.232	84
26 x 72	10.9	7.692	84
26 x 84	12.8	6.593	84
26 x 96	14.6	5.769	84
26 x108	16.4	5.128	84
26 x120	18.2	4.616	84
27½x 60	9.8	8.728	85
27½x 96	15.6	5.455	85
27½x108	17.4	4.848	85
27½x120	19.5	4.364	85

BRICK AND STONE FACED SIDING

Brick or stone siding, either painted or galvanized, can be furnished immediately from stock. We carry plain brick siding in sheets 28x60 inches in No. 26 and 28 gauge and the galvanized rockfaced brick and stone siding in sheets 28x60 inches in No. 28 gauge. Any other sizes of both brick and stone siding can be shipped promptly from mill.

CURVED CORRUGATED SHEETS

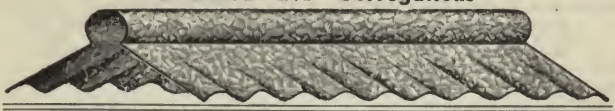
Curved corrugated sheets are most frequently used in heavy construction between I-beams, but are also commonly employed in construction of tanks, cisterns, reservoirs, roofs, arches, ventilators, culverts and the like. Made in 16 gauge and lighter in black, painted or galvanized steel, with 1¼" or 2½" corrugations — curved to any desired span and rise.



Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbit 203
Rod 213
Bolt Reir 22
Data 243

CORRUGATED RIDGE ROLL

Galvanized—2½" Corrugations



Gauge	Roll	Girth	Apron	Stock Lgths. Ft.
No. 20	2"	12"	4"	10
No. 22	2"	12"	4"	10
No. 24	2"	12"	4"	10
*No. 26	2"	12"	4"	10
*No. 28	2"	12"	4"	10

* Also carried with 1¼" corrugations. Other gauges with 1¼" corrugations also painted or plain, furnished promptly.

LEAD HEADED NAILS

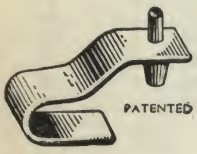
Galvanized nails with lead heads widely used for fastening corrugated roofing or siding as they eliminate the need for lead washers. Their close, tight contact prevents rust.

Size in Inches	Gauge	In Stock At	Size in Inches	Gauge	In Stock At	Size in Inches	Gauge	In Stock At
1½	No. 10	Phil.	2	No. 10	Phil.	2½	No. 10	N.Y.
1¾	No. 10	Phil.	2¼	No. 10	N.Y.	3	No. 10	N.Y.

LEAD WASHERS

Carried in stock for use with roofing nails.

PATTERSON CLIPS



Can be fastened to practically any type or size of structural steel shapes. A welcomed improvement over the strap fasteners because of the time it saves in installation and its elimination of play between the corrugated sheet and structural shape. 25 to 30 clips are generally required for 100 square feet of roofing.

Quantities packed and shipping weights as follows: 1,000, 72 lbs.; 500, 36 lbs.; 250, 19 lbs. Also shipped in bulk in any quantity. Net weight of clips is 15 to the pound. Each clip is furnished with a steel burr.

GALVANIZED ROOFING NAILS

For laying corrugated roofing and siding. Galvanized barbed roofing nails and lead washers are carried in stock for immediate shipment. Lead washers when used with roofing nails make a water-tight joint.

Carried in stock 1", 1¼" 1½", 1¾", 2" and 2½" long.

CLINCH OR PURLIN NAILS

Used for Fastening Corrugated Sheets to Iron Frame

Shipped from our New York Plant

Galvanized No. 9 Wire 3, 3½, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 inches long.

Approximate Number of Nails to the Pound

Size In.	Nails Per Lb.	Size In.	Nails Per Lb.	Size In.	Nails Per Lb.	Size In.	Nails Per Lb.	Size In.	Nails Per Lb.
3	60	5	34	8	22	11	16	13	14
3½	53	6	30	9	20	12	15	14	13
4	43	7	25	10	17				

COLD ROLLED SHEETS

Prime Quality

A continuous mill product with de-oxidized silver finish. Gauge tolerances are held closer than on general run of finished sheets. Sheets are carefully annealed resulting in uniform temper.

High finish resulting from this manufacturing process assures an excellent base for baked enamel and lacquer finishes. For certain applications a satisfactory plated finish can be secured.

Particularly suited to stamping, forming and moderate drawing operations.

U.S.S. Gauge & Size, Inches	Est. Wt. Per Sheet	Net Extra for Size
¼(.250") Wt. per Sq. Ft. 10.20		
24x 96	163.2	+1.25
30x 96	204.0	+1.25
48x 96	326.4	+1.25
No. 7(3/16") Wt. per Sq. Ft. 7.50		
24x 96	N.Y. 120.0	+1.25
36x 96	180.0	+1.25
36x120	225.0	+1.25
No. 9(.1494") Wt. per Sq. Ft. 6.25		
24x 96	Chgo. 100.0	+1.25
No. 10(.1345") Wt. per Sq. Ft. 5.625		
24x 96	Chgo. 90.0	+1.25
36x 96	135.0	+1.25
36x120	N.Y.	+1.25
48x120	"	+1.25
No. 11(.1196") Wt. per Sq. Ft. 5.00		
24x 96	N.Y. 80.0	— .15
30x 96	100.0	— .15
36x 96	120.0	— .15
36x120	150.0	— .15
48x120	N.Y. 200.0	— .15
No. 12(.1046") Wt. per Sq. Ft. 4.375		
24x 96	Chgo. 70.0	— .15
30x 96	87.5	— .15
36x 96	105.0	— .15
48x 96	N.Y. 140.0	— .15
48x120	175.0	— .15
No. 13(.0897") Wt. per Sq. Ft. 3.75		
30x 96	N.Y. 75.0	— .15
36x 96	90.0	— .15
36x120	112.5	— .15
48x120	N.Y. 150.0	— .15
No. 14(.0747") Wt. per Sq. Ft. 3.125		
24x 96	N.Y. 50.0	— .15
30x 96	62.5	— .15
36x 96	75.0	— .15
36x120	93.8	— .15
48x120	N.Y. 125.0	— .15
No. 15(.0673") Wt. per Sq. Ft. 2.812		
24x 96	Chgo. 45.0	— .10
36x 96	N.Y. 67.5	— .10
No. 16(.0598") Wt. per Sq. Ft. 2.50		
24x 96	N.Y. 40.0	— .05
30x 96	50.0	— .05
30x120	Bost. 63.0	— .05
36x 96	60.0	— .05
36x120	75.0	— .05
42x 96	N.Y. 70.0	— .05
48x 96	N.Y. 80.0	— .05
48x120	100.0	— .05
No. 17(.0538") Wt. per Sq. Ft. 2.25		
24x 96	Chgo. 36.0	Base
No. 18(.0478") Wt. per Sq. Ft. 2.00		
24x 96	N.Y. 32.0	+ .05
30x 96	40.0	+ .05
30x120	Bost. 50.0	+ .05
36x 96	48.0	+ .05
36x120	60.0	+ .05
42x 96	N.Y. 56.0	+ .05
48x120	80.0	+ .05
No. 19(.0418") Wt. per Sq. Ft. 1.75		
24x 96	N.Y. 28.0	+ .10
30x 96	35.6	+ .10
36x 96	N.Y. 43.0	+ .10
No. 20(.0359") Wt. per Sq. Ft. 1.50		
24x 96	N.Y. 24.0	+ .15
30x 96	30.0	+ .15
30x120	Bost. 37.5	+ .15
36x 96	N.Y. 36.0	+ .15
36x120	45.0	+ .15
42x144	Chgo. 63.0	+ .15
48x 96	N.Y. 48.0	+ .15
48x120	60.0	+ .15
No. 21(.0329") Wt. per Sq. Ft. 1.375		
24x 96	N.Y. 22.0	+ .20
No. 22(.0299") Wt. per Sq. Ft. 1.25		
24x 96	Det. 20.0	+ .25
30x 96	25.0	+ .25
36x 96	30.0	+ .25
36x120	37.5	+ .40
No. 23(.0269") Wt. per Sq. Ft. 1.125		
24x 96	N.Y. 18.0	+ .35
No. 24(.0239") Wt. per Sq. Ft. 1.00		
24x 96	N.Y. 16.0	+ .45
30x 96	20.0	+ .45
36x 96	N.Y. 24.0	+ .45
36x120	30.0	+ .65
No. 25(.0209") Wt. per Sq. Ft. .875		
24x 96	N.Y. 14.0	+ .50
36x 96	21.0	+ .55
No. 26(.0179") Wt. per Sq. Ft. .75		
24x 96	N.Y. 12.0	+ .55
30x 96	15.0	+ .55
36x 96	N.Y. 18.0	+ .65
36x120	22.5	+ .85
No. 28(.0419") Wt. per Sq. Ft. .625		
24x 96	N.Y. 10.0	+ .70
30x 96	12.5	+ .70
No. 30(.0120") Wt. per Sq. Ft. .50		
30x 96	10.0	+ .95
No. 31(.0109") Wt. per Sq. Ft. .4375		
24x 96	N.Y. 7.0	+1.10

INLAND HI-STEEL SHEETS

COLD ROLLED, STRETCHER LEVELED

See Hi-Steel Section

Spec. Sheets 157
Stainless 167
Tubing 189
Blr. Tube Babbit 203
Welding Rod 213
Bolt Reir 22.
Data 243

DEEP DRAWING SHEETS

Cold Rolled, Prime, Extra Deep Quality

Prime, extra deep drawing quality sheets from selected heats of low carbon steel. Sheets are thoroughly annealed, highly finished to a de-oxidized silver finish resembling cold rolled strip steel, and oiled. Maximum fabricating qualities and uniformity are assured. For certain applications a satisfactory plated finish can be secured.

Used for difficult drawing, spinning, and stamping operations such as automobile bodies, stamped crown fenders, metal fixtures and novelties, and laboratory equipment.

U.S.S. Gauge & Size, Inches	Est. Wt. per Sheet	Net Extra for Size
¼(.250") Wt. per Sq. Ft. 10.20		
24x 96	163.2	+1.25
No. 7(3/16") Wt. per Sq. Ft. 7.50		
24x 96	N.Y. 120.0	+1.25
36x 96	180.0	+1.25
36x120	225.0	+1.25
No. 9(.1494") Wt. per Sq. Ft. 6.25		
24x 96	Chgo. 100.0	+1.25
No. 10(.1345") Wt. per Sq. Ft. 5.625		
24x 96	Chgo. 90.0	+1.25
36x 96	135.0	+1.25
36x120	N.Y. 168.8	+1.25
48x120	N.Y. 225.0	+1.25
No. 11(.1196") Wt. per Sq. Ft. 5.00		
24x 96	N.Y. 80.0	— .15
30x 96	N.Y. 100.0	— .15
36x 96	120.0	— .15
36x120	N.Y. 150.0	— .15
48x120	N.Y. 200.0	— .15
No. 12(.1046") Wt. per Sq. Ft. 4.375		
24x 96	Chgo. 70.0	— .15
30x 96	87.5	— .15
36x 96	105.0	— .15
48x 96	N.Y. 140.0	— .15
48x120	175.0	— .15
No. 13(.0897") Wt. per Sq. Ft. 3.75		
30x 96	N.Y. 75.0	— .15
36x 96	90.0	— .15
36x120	Phil. 112.5	— .15
48x120	N.Y. 150.0	— .15
No. 14(.0747") Wt. per Sq. Ft. 3.125		
24x 96	N.Y. 50.0	— .15
30x 96	62.5	— .15
36x 96	75.0	— .15
36x120	93.8	— .15
48x120	N.Y. 125.0	— .15
No. 15(.0673") Wt. per Sq. Ft. 2.812		
24x 96	Chgo. 45.0	— .10
36x 96	N.Y. 67.5	— .10
No. 16(.0598") Wt. per Sq. Ft. 2.50		
24x 96	N.Y. 40.0	— .05
30x 96	50.0	— .05
30x120	Bost. 63.0	— .05
36x 96	60.0	— .05
36x120	75.0	— .05
42x 96	N.Y. 70.0	— .05
48x 96	80.0	— .05
48x120	100.0	— .05
No. 17(.0538") Wt. per Sq. Ft. 2.25		
24x 96	Chgo. 36.0	Base

U.S.S. Gauge & Size, Inches	Est. Wt. per Sheet	Net Extra for Size
No. 18(.0478") Wt. per Sq. Ft. 2.00		
24x 96	N.Y. 32.0	+ .05
30x 96	40.0	+ .05
30x120	Bost. 50.0	+ .05
36x 96	48.0	+ .05
36x120	60.0	+ .05
42x 96	N.Y. 56.0	+ .05
48x120	80.0	+ .05
No. 19(.0418") Wt. per Sq. Ft. 1.75		
24x 96	N.Y. 28.0	+ .10
36x 96	N.Y. 42.0	+ .10
No. 20(.0359") Wt. per Sq. Ft. 1.50		
24x 96	N.Y. 24.0	+ .15
30x 96	30.0	+ .15
30x120	Bost. 37.5	+ .15
36x 96	36.0	+ .15
36x120	45.0	+ .15
42x144	Chgo. 63.0	+ .15
48x 96	N.Y. 48.0	+ .15
48x120	60.0	+ .15
No. 21(.0329") Wt. per Sq. Ft. 1.375		
24x 96	N.Y. 22.0	+ .20
No. 22(.0299") Wt. per Sq. Ft. 1.25		
24x 96	Det. 20.0	+ .25
30x 96	25.0	+ .25
36x120	37.5	+ .40
No. 23(.0269") Wt. per Sq. Ft. 1.125		
24x 96	N.Y. 18.0	+ .35
No. 24(.0239") Wt. per Sq. Ft. 1.00		
24x 96	N.Y. 16.0	+ .45
30x 96	20.0	+ .45
36x 96	N.Y. 24.0	+ .45
36x120	30.0	+ .65
No. 25(.0209") Wt. per Sq. Ft. .875		
24x 96	N.Y. 14.0	+ .50
36x 96	21.0	+ .55
No. 26(.0179") Wt. per Sq. Ft. .75		
24x 96	N.Y. 12.0	+ .55
30x 96	15.0	+ .55
36x 96	N.Y. 18.0	+ .65
36x120	22.5	+ .85
No. 28(.0149") Wt. per Sq. Ft. .625		
24x 96	N.Y. 10.0	+ .70
30x 96	12.5	+ .70
No. 30(.0120") Wt. per Sq. Ft. .50		
30x 96	10.0	+ .95
No. 31(.0109") Wt. per Sq. Ft. .4375		
24x 96	N.Y. 7.0	+1.10

STRETCHER LEVELED SHEETS

Prime Quality

Cold Rolled—Truck Panel and Furniture Stock

Flatness assured by stretcher leveling. Cold rolled to a high finish, and oiled. Resquared to exact size. For certain applications a satisfactory plated finish can be secured. Excellent for paint, lacquer and enamel finishes.

Meets most exacting truck body requirements. Used for flat panel work, metal furniture, table tops, partitions, lockers, and applications where perfect flatness is desired.

U.S.S. Gauge & Size, Inches	Est. Wt. Per Sheet	Net Extra for Size
¼(.250") Wt. per Sq. Ft. 10.20		
24x 96	163.2	+1.25
30x 96	204.0	+1.25
30x120	255.0	+1.25
36x 96	244.8	+1.25
36x120	306.0	+1.25
48x120	408.0	+1.25
48x144	St. L. 489.6	+1.25
No. 7 (⅛") Wt. per Sq. Ft. 7.50		
30x 96	150.0	+1.25
36x 96	180.0	+1.25
40x120	250.0	+1.25
48x 96	240.0	+1.25
48x120	300.0	+1.25
No. 10(.1345") Wt. per Sq. Ft. 5.625		
36x 96	135.0	+1.25
36x120	168.8	+1.25
48x120	225.0	+1.25
48x144	Buff. 270.0	+1.25
No. 11(.1196") Wt. per Sq. Ft. 5.00		
36x 96	120.0	— .15
36x120	150.0	— .15
40x 96	133.0	— .15
42x144	Buff. 210.0	— .15
48x120	200.0	— .15
60x144	300.0	Base
No. 12(.1046") Wt. per Sq. Ft. 4.375		
36x 96	105.0	— .15
36x120	131.3	— .15
48x 96	140.0	— .15
48x120	175.0	— .15
No. 13(.0897") Wt. per Sq. Ft. 3.75		
36x 96	N.Y. 90.0	— .15
No. 14(.0747") Wt. per Sq. Ft. 3.125		
30x 96	N.Y. 62.5	— .15
30x120	Chgo. 78.1	— .15
36x 96	75.0	— .15
36x120	93.8	— .15
40x 96	83.3	— .15
48x 96	100.0	— .15
48x120	125.0	— .15
48x144	150.0	— .15
72x120	Chgo. 187.5	+ .20
72x144	N.Y. 225.0	+ .20
No. 16(.0598") Wt. per Sq. Ft. 2.50		
24x120	50.0	— .05
30x 96	N.Y. 50.0	— .05
30x120	Chgo. 62.5	— .05
36x 96	60.0	— .05
36x120	75.0	— .05
48x 96	80.0	— .05
48x120	100.0	— .05
48x144	N.Y. 120.0	— .05

U.S.S. Gauge & Size, Inches	Est. Wt. Per Sheet	Net Extra for Size
No. 16(.0598") Wt. per Sq. Ft. 2.50		
54x120	N.Y. 112.5	Base
60x144	150.0	"
72x120	Chgo. 150.0	+ .40
72x144	N.Y. 180.0	+ .40
No. 18(.0478") Wt. per Sq. Ft. 2.00		
30x 96	N.Y. 40.0	+ .05
36x 96	48.0	+ .05
36x120	60.0	+ .05
36x144	N.Y. 72.0	+ .10
42x 96	56.0	+ .05
42x120	70.0	+ .05
42x144	84.0	+ .05
48x 96	64.0	+ .05
48x120	80.0	+ .05
54x156	117.0	+ .20
60x144	120.0	+ .20
No. 20(.0359") Wt. per Sq. Ft. 1.50		
24x 96	24.0	+ .15
24x120	30.0	+ .15
30x 72	22.5	+ .15
30x 96	30.0	+ .15
30x120	37.5	+ .15
30x144	45.0	+ .30
36x 72	27.0	+ .15
36x 96	36.0	+ .15
36x120	45.0	+ .15
36x144	54.0	+ .30
36x156	58.5	+ .30
*36x168	Chgo. 63.0	+ .30
40x120	50.0	+ .15
42x 72	31.5	+ .15
42x 96	42.0	+ .15
42x120	52.5	+ .15
42x144	63.0	+ .30
42x156	68.2	+ .30
44x 72	33.0	+ .15
44x120	54.9	+ .15
44x144	65.8	+ .30
48x 72	36.0	+ .15
48x 96	48.0	+ .15
48x120	60.0	+ .15
48x144	72.0	+ .30
48x156	78.0	+ .30
48x168	84.0	+ .30
48x192	96.0	+ .60
54x120	67.5	+ .60
54x144	81.0	+ .60
60x 96	60.0	+ .70
60x120	75.0	+ .70
60x144	90.0	+ .70
60x156	97.5	+ .70

(Continued)

* Stretcher leveled but not resquared.

C. R. Strip 158
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STRETCHER LEVELED SHEETS

Prime Quality

U.S.S. Gauge & Size, Inches	Est. Wt. Per Sheet	Net Extra for Size
(Continued)		
No. 22(.0299")	Wt. per Sq. Ft.	1.25
24x 96	20.0	+ .25
24x120	25.0	+ .40
30x 96	25.0	+ .25
30x120	31.3	+ .40
30x144	N.Y. 37.5	+1.00
36x 72	22.5	+ .25
36x 96	30.0	+ .25
36x120	37.5	+ .40
36x144	45.0	+1.00
42x 96	N.Y. 35.0	+ .50
42x120	43.8	+ .50
42x144	Buff. 52.5	+ .60
44x120	45.0	+ .50
48x 72	30.0	+ .45
48x 96	40.0	+ .45
48x120	50.0	+ .60
48x144	60.0	+1.40
48x156	Buff. 65.0	+1.40
No. 24(.0239")	Wt. per Sq. Ft.	1.00
30x 96	20.0	+ .45
36x 96	24.0	+ .45
36x120	N.Y. 30.0	+ .65
No. 26(.0179")	Wt. per Sq. Ft.	.75
36x 96	18.0	+ .65
42x144	Chgo. 31.5	+1.90

COLD ROLLED STRIP STEEL

Prime Quality

Affords maximum gauge accuracy and uniformity of temper. This material is used as a base for various plating finishes.

Stock widths vary from exact size to 3/8" over size. No charge will be made for trimming when exact widths here listed are required. Can be furnished in any widths desired.

Dead Soft Temper—6' to 8' Lengths

Identification Color: Yellow

Rockwell B 54 and under

Thickness	Ga. or Fract. Equiv.	Width Inches	Weight Per Sq. Ft.
.010	No. 31	24¾	.408
.012	No. 30	6, N.Y. 24¾	.490
.014	No. 28	6	.571
.015		24¾	.612
.016	1/64	6,Chgo. 12⅜, N.Y. 24¾	.653
.018	No. 25	24¾	.734
.020	No. 25	24¾	.816
.022	No. 24	24¾	.898
.025	No. 23	24¾	1.020
.028	No. 22	24¾	1.142
.032	1/32	24¾	1.306
.035	No. 20	24¾	1.428
.042	No. 19	24¾	1.713
.050	No. 18	24¾	1.999
.058	No. 17	24¾	2.366
.0625	1/16	24¾	2.500
.065	No. 16	24¾	2.651
.072	No. 15	24¾	2.938
.078	5/64	24¾	3.125
.083	No. 14	24¾	3.386
.095	3/32	24¾	3.876
.100		12⅜	4.000
.109	7/64	24¾	4.375
.120	No. 11	24¾	4.896
.125	1/8	24¾	5.000
.134	No. 10	24¾	5.467
.148	No. 9	Chgo. 24¾	6.038
.156	5/32	24¾	6.250
.165	No. 8	18½	6.732
.187	3/16	24¾	7.500
.203	13/16	Det. 24¾	8.282
.219	7/32	24¾	8.750
.250	1/4	24⅜	10.000

COLD ROLLED STRIP STEEL—(Cont'd)

Half Hard Temper—6′ and 8′ Lengths

Identification Color: Blue

Rockwell B 65-85

Thickness	Ga. or Fract. Equiv.	Width Inches	Weight Per Sq. Ft.	Thickness	Ga. or Fract. Equiv.	Width Inches	Weight Per Sq. Ft.
.010	No. 31	6	.408	.0625	1/16	24¾	2.500
.012	No. 30	6	.490	.065	No. 16	24¾	2.651
.014	No. 28	6	.571	.072	No. 15	24¾	2.938
.016	1/64	6,Chgo. 12⅜	.653	.078	5/64	N.Y. 24¾	3.125
.018	No. 26	12,N.Y. 24¾	.734	.083	No. 14	24¾	3.386
.020	No. 25	24¾	.816	.095	3/32	24¾	3.876
.022	No. 24	12	.898	.109	7/64	24¾	4.375
.025	No. 23	24¾	1.020	.120	No. 11	Chgo. 24¾	4.896
.028	No. 22	24¾	1.142	.125	1/8	24¾	5.000
.032	1/32	24¾	1.306	.134	No. 10	Chgo. 24¾	5.467
.035	No. 20	24¾	1.428	.156	5/32	24¾	6.250
.042	No. 19	24¾	1.713	.187	3/16	24¾	7.500
.050	No. 18	24¾	1.999	.250	1/4	Chgo. 12⅜	10.000
.058	No. 17	24¾	2.366				

Prime Quality

Identification Color: Red

Hard Temper—6′ and 8′ Lengths

Rockwell B 85 Minimum

Thickness	Ga. or Fraction Equivalent	Width Inches	Wt. Per Sq. Ft.	Thickness	Ga. or Fraction Equivalent	Width Inches	Wt. Per Sq. Ft.
.010	No. 31	6	.408	.058	No. 17	24¾	2.366
.012	No. 30	6	.490	.0625	1/16	24¾	2.500
.014	No. 28	6	.571	.072	No. 15	24¾	2.938
.016	1/64	6,Chgo. 12⅜	.653	.078	5/64	Chgo. 24¾	3.125
.018	No. 26	6,Chgo. 12⅜	.734	.083	No. 14	24¾	3.386
.020	No. 25	12⅜	.816	.095	3/32	24¾	3.876
.022	No. 24	12⅜	.898	.109	7/64	24¾	4.375
.025	No. 23	24¾	1.020	.120	No. 11	Chgo. 24¾	4.896
.028	No. 22	24¾	1.142	.125	1/8	24¾	5.000
.032	1/32	24¾	1.306	.156	5/32	24¾	6.250
.035	No. 20	24¾	1.428	.187	3/16	18½, N.Y. 24¾	7.500
.042	No. 19	24¾	1.713				
.050	No. 18	24¾	1.999	.375	3/8	N.Y. 20	15.000

COLD ROLLED SHIM STEEL

In Coils

Rolled very accurate to gauge, has bright finish. Material can be slit to any width and recoiled.

Thickness	Gauge Equivalent	Width Inches	Wt. Per Sq. Ft.	Thickness	Gauge Equivalent	Width Inches	Wt. Per Sq. Ft.
.0015		6	.060	.008	No. 33	6	.326
.002		6	.082	.009	No. 32	6	.367
.003		6	.122	.010	No. 31	6	.408
.004	No. 36	6	.163	.012	No. 30	6	.490
.005	No. 35	6	.204	.014	No. 28	6	.571
.006		6	.245	.015		N.Y. 6	.612
.007	No. 34	6	.286	.016	No. 27	6	.653

Stainless 167
Tubing 189
Blr. Tube Babbit 203
Welding Rod 213
Bolt Reir 22.
Data 243

COLD ROLLED FLAT WIRE

No. 3 Temper, No. 4 Round Edge
Rockwell B 65—75

The high luster finish of this flat wire permits highly polished nickel and chrome finishes. It has finely finished rounded edges and material is held very close to gauge. Used for making accessories and fixtures of all kinds; locks and hinges; trunks and bags reinforcing; wood and metal patterns.

Straightened and Cut—12′ Lengths

Thickness	Ga. or Fract. Equiv.	Width Inches	Wt. Per Lineal Ft.
.025	No. 23	¾	.061
.028	No. 22	½	Chgo.
.032	1/32	¼	.027
		5/16	.034
		⅜	.040
		½	.054
		⅝	.067
		¾	.081
		⅞	.090
		1	.108
		1¼	.130
		1½	.160
		2	N.Y.
.035	No. 20	¼	N.Y.
		5/16	.037
		⅜	N.Y.
		½	N.Y.
		⅝	N.Y.
		¾	N.Y.
		⅞	Chgo.
		1	N.Y.
		1⅛	.135
		1¼	.150
.042	No. 19	5/16	.044
		⅜	.053
		½	.071
		⅝	.088
		¾	.106
		⅞	.123
		1	.142
.050	No. 18	3/16	Chgo.
		¼	.042
		5/16	.052
		⅜	.060
		7/16	.070
		½	.084
		9/16	N.Y.
		⅝	.100
		¾	.126
		⅞	.140
		1	.168
		1⅛	.172
		1¼	.210
		1½	.240
		1¾	.294
		2	N.Y. .330
.0625	1/16	3/16	.040
		¼	.053
		5/16	.067
		⅜	.080
		7/16	.090
		½	.107
.0625	1/16	9/16	.119
		⅝	.133
		¾	.160
		⅞	.186
		1	.213
		1⅛	.238
		1¼	.264
		1½	.319
		1⅝	N.Y. .344
		1¾	.370
		2	.420
		2½	N.Y. .525
		3	N.Y. .630
.072	No. 15	½	.120
		⅝	Chgo.
		¾	.182
		1	.244
		1¼	.306
.078	5/64	¼	N.Y. .072
		⅜	N.Y. .105
		½	N.Y. .141
		⅝	N.Y. .150
		¾	.195
		1	N.Y. .282
.080	No. 14	½	Chgo.
		⅝	Det.
		1	Det.
.083	No. 14	¼	.070
		5/16	.090
		⅜	.110
		7/16	.126
		½	.140
		⅝	.170
		¾	.210
		1	N.Y.
		1¼	.350
		1½	.420
		1¾	.490
.094	3/32	3/16	N.Y.
		¼	.078
		5/16	.098
		⅜	.118
		7/16	.140
		½	.157
		⅝	.196
		¾	.235
		⅞	.275
		1	.314
		1⅛	.363
		1¼	.401
		1½	.481
		1¾	.549
		2	N.Y.

(Continued)

COLD ROLLED FLAT WIRE

Soft No. 2 Temper, No. 4 Round Edge
Rockwell B 65—75

Straightened and Cut—12' Lengths

Thickness	Fract. Equiv.	Width Inches	Wt. Per Lineal Ft.
(Continued)			
.109	No. 12	3/8	Chgo.
		1/2	N.Y.
		5/8	.230
		3/4	N.Y.
		1	N.Y.
.125	1/8	1/4	.106
		5/16	.133
		3/8	.160
		7/16	.180
		1/2	.212
		5/8	.266
		3/4	.320
		7/8	.373
		1	.426
		1 1/8	.470
		1 1/4	.528
		1 3/8	N.Y. .581
		1 1/2	.633
		1 3/4	.746
		2	.850
		2 1/2	N.Y. 1.063
		3	N.Y. 1.266
.156	5/32	3/8	Chgo.
		1/2	.213
		5/8	.333
		3/4	.397
		7/8	.469
		1	.530
.187	3/16	1/4	N.Y.
		5/16	.199
		3/8	.239
		7/16	Chgo.
		1/2	.319
		5/8	.399
		3/4	.478
		7/8	.558
		1	.638
		1 1/4	.797
		1 1/2	.956
		1 3/4	N.Y.
		2	"
.250	1/4	1	N.Y. .850

Same in Coils

Shipped from our Chicago Plant

Thickness	Fract. Equiv.	Width Inches	Wt. Per Lineal Ft.
.0625	1/16	3/16	.040
		1/4	.053
		5/16	.067
.0625	1/16	3/8	.080
		1/2	.107

Half Hard Temper—In Coils

Suitable for various types of forming work and also for Box Strapping

Shipped from our Chicago Plant

Thickness	Gauge	Width in Inches	Wt. Per Lineal Ft.
.018	No. 26	5/8	.038
.035	No. 20	1 1/4	.150

AN AID FOR STEEL USERS

The increased production speeds and improved manufacturing standards of the last few years have emphasized the need for greater uniformity and higher quality in steels.

Ryerson began work on this problem several years ago. By tightening specifications and making inspections more rigid, we gradually built up stocks of these better steels. Today we are in a position to definitely and unequivocally certify to the known high quality and uniformity of all steel in stock.

Stainless 167
Tubing 189
Blr. Tube Babbit 203
...elding Rod 213
Bolt Reir 22.
Data 243
C...

LONG TERNE SHEETS

Lead Coated—Prime Quality

Prime quality ternes with a dark, oiled finish. Made from a base sheet of soft steel and coated with lead and tin, to mill's regular standard practice. Can be worked without chipping and are particularly adapted to soldering, due to the natural close union of lead and solder.

Recommended for soldered tanks, automobile accessories, hood and radiator work, as well as automobile fenders, mud guards, fireproof window work and other stamping and forming operations. Some moderate drawing operations can also be secured.

U.S.S. Gauge and Size in Inches	Est. Wt. Per Sheet	Net Size Extra	U.S.S. Gauge and Size in Inches	Est. Wt. Per Sheet	Net Size Extra
No. 16x36x 96	N.Y.	—.25	**No. 24**x30x 96	N.Y.	Base
36x120	75.55	—.25	36x 96	24.44	"
No. 18x36x 96	48.44	—.15	36x120	30.55	"
36x120	60.55	—.15	**No. 26**x30x 96	N.Y.	+.25
No. 20x36x 96	36.44	—.10	36x 96	18.44	+.25
36x120	45.55	—.10	36x120	23.05	+.25
No. 22x30x 96	N.Y.	—.05	**No. 28**x30x120	N.Y.	+.50
36x 96	30.44	—.05	36x 96	N.Y.	+.70
36x120	38.05	—.05	36x120	Chgo.	+.70

No scrap allowance on Long Terne Sheets cut to special sizes. Waste retained unless advised to the contrary.

ALLEGHENY ELECTRICAL SHEETS

Electrical Grade—Prime Quality

Made from a special open hearth analysis steel. Specially heat treated and tested for electrical properties. Suitable for general core work where high permeability at the higher inductions is imperative and moderately low core loss is required. Practically non-aging and soft annealed free from injurious scale and oxide, desirable for punching.

Especially recommended for armature punchings of D.C. Motors, Generators and Transformers.

Core-loss on all grades is shown in Watts per lb. and is guaranteed maximum loss with induction 10,000 and frequency 60 cycles. Silicon content .85 to 1.10.

U.S.S. Gauge & Size in Inches	Estimated Weight Per Sheet	Maximum Core Loss	In Stock At
No. 24x30x108	22.50	1.70	Chgo.
No. 26x30x108	16.67	1.35	Phil.
No. 28x30x108	14.06	1.23	Chgo.
No. 29x30x108	12.66	1.17	Chgo.

Grade "C" Transformer—Prime Quality

Shipped from our New York Plant

A high silicon commercial transformer grade made in accordance with best practice. A low core loss conforming to best standard ratings. Used largely in power and distributing transformers. Particularly adapted for audio transformers. Silicon content 4.0 to 4.5.

U.S.S. Gauge & Size in Inches	Estimated Weight per Sheet	Maximum Core Loss
No. 26x30x108	16.20	.83
No. 29x30x108	12.29	.72

Shearing charges on request.

VITREOUS ENAMELING SHEETS

Prime Quality

These sheets have a special surface for fusing with vitreous enamel at high temperatures. Being an Iron sheet especially free from impurities, the loss due to blisters or buckling is reduced to a minimum. Adapted to high grade work such as table tops, hospital, dental, barber, dairy and restaurant equipment, stove panels and for other purposes where a perfect enamel is desired.

U.S.S. Gauge and Size Inches	Est.Wt. Per Sheet	Net Extra for Size
No. 16(.0598")	Wt. per Sq. Ft. 2.50	
24x 96	40.0	— .20
24x120	50.0	— .20
30x 96	N.Y. 50.0	— .20
36x 96	60.0	— .20
36x120	75.0	— .20
42x 96	N.Y. 70.0	— .20
42x120	87.5	— .20
48x 96	80.0	— .20
48x120	100.0	— .20
No. 18(.0478")	Wt. per Sq. Ft. 2.00	
24x 96	32.0	— .10
24x120	40.0	— .10
30x 96	40.0	— .10
30x120	50.0	— .10
36x 96	48.0	— .10
36x120	60.0	— .10
36x144	72.0	Base
42x120	70.0	— .10
48x 96	64.0	— .10
48x120	80.0	— .10
48x144	96.0	Base
No. 20(.0359")	Wt. per Sq. Ft. 1.50	
24x 96	24.0	Base
24x120	30.0	"
30x 96	30.0	"
30x120	37.5	"
36x 96	36.0	"
36x120	45.0	"
42x120	52.5	"
48x 96	48.0	"
48x120	60.0	"
No. 22(.0299")	Wt. per Sq. Ft. 1.25	
24x 96	20.0	+ .10
24x120	25.0	+ .10
30x 96	25.0	+ .10
30x120	31.3	+ .10
36x 96	30.0	+ .10
36x120	37.5	+ .10
No. 24(.0239")	Wt. per Sq. Ft. 1.00	
24x120	20.0	+ .50
30x 96	20.0	+ .30
30x120	25.0	+ .50
36x 96	24.0	+ .30
36x120	30.0	+ .50

VITREOUS ENAMELING SHEETS

Prime, Extra Deep Drawing and Spinning Quality

Shipped from our Chicago Plant

Similar to the Vitreous Enameling Sheets described above. These are, however, particularly suited to drawing, spinning and stamping work.

U.S.S. Gauge and Size Inches	Est.Wt. Per Sheet	Net Extra for Size
No. 16(.0598")	Wt. per Sq. Ft. 2.50	
30x120	62.5	— .20
36x120	75.0	— .20
No. 18(.0478")	Wt. per Sq. Ft. 2.00	
30x 96	40.0	— .10
36x 96	48.0	— .10
36x120	60.0	— .10
No. 20(.0359")	Wt. per Sq. Ft. 1.50	
24x 96	24.0	Base
30x 96	30.0	"
36x 96	36.0	"
36x120	45.0	Base
No. 22(.0299")	Wt. per Sq. Ft. 1.25	
24x 96	20.0	+ .10
30x 96	25.0	+ .10
36x120	37.5	+ .10
No. 24(.0239")	Wt. per Sq. Ft. 1.00	
30x 96	20.0	+ .30
36x120	30.0	+ .50
No. 26(.0179")	Wt. per Sq. Ft. .75	
36x120	22.5	+ .70

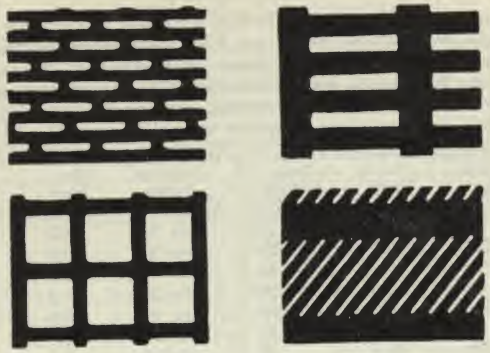
UNIFORM BLUE SHEETS

Prime Quality

Solid color sheets used for stove pipes, steel ranges, and for other applications requiring uniformity of color finish.

U.S.S. Gauge and Size in Inches	Est. Wt. Per Sheet Lbs.
No. 24x24x101	Chgo. 16.8
No. 26x24x101	12.6
30x101	Chgo. 15.8
No. 27x24x101	11.6
No. 28x24x101	10.5
No. 29x24x101	9.5

PERFORATED SHEETS AND PLATES



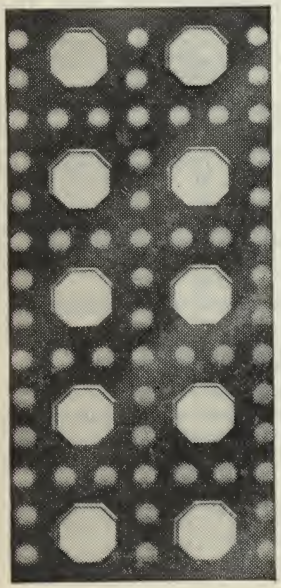
Perforated Sheets can be furnished in standard or special design from any grade of steel including stainless. When writing for estimate please specify quantity, type of material, gauge, dimensions, size and type of hole, spacing both ways, margins, and necessary fabrication, rolling or forming.

The two types shown below are available from stock in hot rolled annealed sheets in the following sizes:

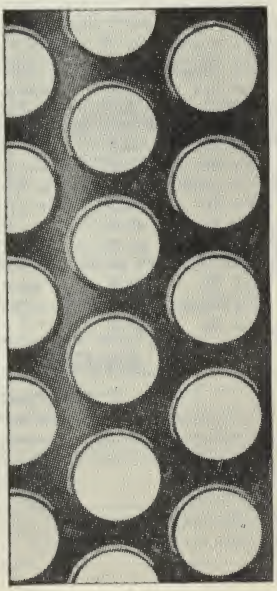
Type	Gauge	Size in Inches
Octagon	No. 20	36x 96
	No. 22	30x120
		36x 96
		36x120

Type	Gauge	Size in Inches
Machine Guard	No. 20	36x 96
		36x120
	No. 22	36x 96

Standard Cane Type
(Actual size)

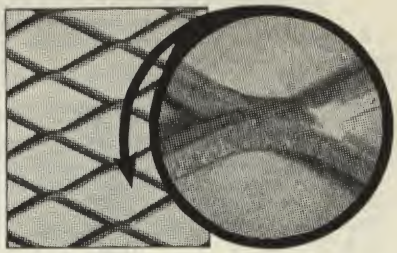


Machine Guard Type
(Actual size)



RYEX EXPANDED METAL

Ryex expanded metal is expanded from a solid sheet of steel. It is more rigid than an equal weight of solid steel plate or wire mesh. It can be cut to any shape retaining its original strength.



All sharp edges have been positively removed from Ryex Metal Standard Mesh and Ryex Flattened Mesh.

RYEX STANDARD EXPANDED METAL

In Stock for Immediate Shipment

For Making Partitions, Window Guards, Machinery Safety Guards

Size in Inches	Gauge (Approx.)	Size of Sheet Width Ft., In.	Size of Sheet Lgth. Ft., In.	Wt. Per Sq. Ft. Lbs. Plain	Size of Mesh (Approx.) Inches
1/2	No. 18	6-0	8-8	0.74	1/2x1 1/4
1/2	No. 18	4-0	8-8	0.74	1/2x1 1/4
3/4	No. 16	6-6	8-0	0.50	7/8x2
3/4	No. 13	6-0	8-0	0.80	7/8x2
3/4	No. 13	4-0	8-0	0.80	7/8x2
3/4	No. 9	4-0	8-0	1.80	7/8x2
1-1/2	No. 13	6-0	8-0	0.60	1 3/8x3
1-1/2	No. 13	4-0	8-0	0.60	1 3/8x3
1-1/2	No. 10	6-0	8-0	0.79	1 3/8x3
1-1/2	No. 10	4-0	8-0	0.79	1 3/8x3
1-1/2	No. 9	6-0	8-0	1.19	1 3/8x3

Sheets of special size can be furnished. An additional charge of $1.00 per 100 pieces will be made for cutting a sheet to odd sizes.

RYEX STANDARD EXPANDED METAL

Shipped from Mill

Size in Inches	Gauge (Approx.)	Size of Sheet Width Ft., In.	Size of Sheet Lgth. Ft., In.	Wt. Per Sq. Ft. Lbs. Plain	Size of Mesh (Approx.) Inches
1/2	No. 16	4-0	8-0	0.81	1/2x1 1/4
1/2	No. 13	6-6	8-0	1.46	1/2x1 1/4
5/8	No. 16	4-0	8-0	0.72	5/8x1 3/4
5/8	No. 13	4-0	8-0	1.18	5/8x1 3/4
5/8	No. 10	6-0	8-0	1.58	5/8x1 3/4
5/8	No. 9	6-0	8-0	2.40	5/8x1 3/4
1	No. 16	5-0	8-0	0.43	1 x2 1/2
1	No. 13	4-8	8-0	0.68	1 x2 1/2
1	No. 10	5-0	8-0	0.95	1 x2 1/2
1	No. 9	5-0	8-0	1.43	1 x2 1/2

The above meshes are not carried in stock, but can be furnished on special order from mill.

Stainless 167
Tubing 189
Blr. Tube Babbit 203
Rod 213
Bolt Reir 22
Data 243

RYEX EXPANDED METAL—(Cont'd)

RYEX FLATTENED EXPANDED METAL

In Stock for Immediate Shipment

A smooth surface, flattened expanded metal for shelving, ornamental grille work, etc.

Width of Diamond Inches	Gauge No.	Weight per Sq. Ft. Pounds	Standard Sheet Widths Inches	Standard Sheet Length-Ft. Inches
1/2	18	0.70	36 & 48	8-0
1/2	16	1.00	36 & 48	8-0
3/4	16	0.61	36 & 48	8-0
3/4	14	0.81	36 & 48	8-0
3/4	9	1.69	48	8-0
1-1/2	16	0.37	36 & 48	8-0
1-1/2	14	0.49	36 & 48	8-0
1-1/2	9	1.13	Chgo. 36 & 48	8-0

Gauge shown is thickness of material before expanding & flattening. Special size sheets can be furnished by arrangement with the Mill. All out-of-town shipments are crated. Flattened mesh has an oil finish, but can be furnished galvanized, tinned or chromium plated.

RYEX FLATTENED EXPANDED METAL

Shipped from Mills

Width of Diamond Inches	Approx. Gauge No.	Wt. Per Sq. Ft. Lbs. Plain	Standard Sheet Widths Inches	Standard Sheet Length Ft. and Inches
1/2	No. 13	1.37	36 & 48	8-0
5/8	No. 16	0.68	36 & 48	8-0
5/8	No. 14	0.93	36 & 48	8-0
5/8	No. 9	2.23	36 & 48	8-0
1	No. 16	0.41	36 & 48	8-0
1	No. 14	0.54	36 & 48	8-0

RYEX 18-8 STAINLESS STEEL STANDARD MESH

Type No. 302—Shipped from Mill

Size in Inches	Approx. Gauge No.	Size of Sheet Width Inches	Size of Sheet Length Ft. & Inches	Wt. Per Sq. Ft. Lbs.
1/2	No. 18	48 & 72	8-0	0.72
1/2	No. 16	48 & 72	8-0	0.88
3/4	No. 18	48 & 72	8-0	0.42
3/4	No. 16	48 & 72	8-0	0.55

RYEX 18-8 STAINLESS STEEL FLATTENED MESH

Type No. 302—Shipped from Mill

Size in Inches	Approx. Gauge No.	Size of Sheet Width Inches	Size of Sheet Length Ft. & Inches	Wt. Per Sq. Ft. Lbs.
1/2	No. 18	36 & 48	8-0	0.70
1/2	No. 16	36 & 48	8-0	0.87
3/4	No. 18	36 & 48	8-0	0.41
3/4	No. 16	36 & 48	8-0	0.54

RYEX SKYWALK EXPANDED METAL

Weights, 3.12 lbs. per sq. ft. Suitable for gratings, machine platforms and steps, walkways, fly galleries, etc. Furnished plain or galvanized, in sheets 24", 36", 48" and 72" wide, 10' long. Size of mesh approximately 2"x6". Special sizes by arrangement with Mill.

RYEX WALKWAY EXPANDED METAL

An extra heavy expanded metal weighing 4.27 pounds per square foot. Suitable for gratings, machine platforms and steps, walkways, fly galleries, etc. Furnished plain or galvanized in sheets 2'0", 3'0", 4'0" and 6'0" wide by 8'0" long. Size of mesh 1.41" x 4".

MILL TOLERANCES on standard stock size sheets of skywalk and walkway mesh are—Width—24" plus 1/4", 36" plus 3/8", 48" plus 5/8", and 72" plus 3/4", length plus 1/4".

Skywalk and Walkway Expanded Metal can be flattened. Maximum width that can be furnished is approximately 48". For sheets of special sizes refer to office.

STAINLESS STEEL TYPE NUMBERS AND ANALYSES

Grades	Type No.	Carbon	Chrome	Nickel	Other Elements
Allegheny 17-7	301	.09-.20	16.0-18.0	7.0- 9.0	Mn. 1.25 Max.
Allegheny 18-8	302	Over .08-.20	18.0-20.0	8.0-10.0	Mn. 1.25 Max.
	302B	Over .08-.20	18.0-20.0	8.0-10.0	Si. 2.0-3.0 Mn. 1.25 Max.
Allegheny 18-8-EZ	303	.20 Max.	18.0-20.0	8.0-10.0	S. or Se. .07 Min. or Mo. .60 Max.
Allegheny 18-8-S	304	.08 Max.	18.0-20.0	8.0-10.0	Mn. 2.0 Max.
Allegheny 20-10-S	308	.08 Max.	19.0-22.0	10.0-12.0	Mn. 2.0 Max.
Allegheny 25-12	309	.20 Max.	22.0-26.0	12.0-14.0	
Allegheny 25-12 S	309S	.08 Max.	22.0-26.0	12.0-14.0	
Allegheny 25-20	310	.25 Max.	24.0-26.0	19.0-21.0	
	311	.25 Max.	19.0-21.0	24.0-26.0	
	312	.25 Max.	27.0-31.0	8.0-10.0	
	315	.15 Max.	17.0-19.0	7.0- 9.5	Cu. 1.0-1.50 Mo. 1.0-1.50
Allegheny 18-8-M	316	.10 Max.	16.0-18.0	14.0 Max.	Mo. 2.0-3.0
Allegheny 18-8-M Spec.	317	.10 Max.	18.0-20.0	14.0 Max.	Mo. 3.0-4.0
Allegheny 18-8-T	321	.10 Max.	17.0-20.0	7.0-10.0	Ti. Min. 4xC
	325	.25 Max.	7.0-10.0	19.0-23.0	Cu. 1.0-1.50
	327	.25 Max.	25.0-30.0	3.0- 5.0	
	329	.10 Max.	25.0-30.0	3.0- 5.0	Mo. 1.0-1.50
Allegheny 35-15	330	.25 Max.	14.0-16.0	33.0-36.0	
Allegheny 18-8-C	347	.10 Max.	17.0-20.0	8.0-12.0	Cb. 10xC.
[illegible]gheny 12-TB	403	.15 Max.	11.5-13.0		Turbine Quality
Allegheny 12-NH	405	.08 Max.	11.5-13.5		Al. .10-.20
Allegheny Ohmaloy	406	.15 Max.	12.0-14.0		Al. 4.0-4.50
Allegheny 12	410	.15 Max.	10.0-14.0		
Allegheny 12-2	414	.15 Max.	10.0-14.0	2.0 Max.	
Allegheny 12-EZ	416	.15 Max.	12.0-14.0		S. or Se. .07 Min. or Mo. .60 Max.
Allegheny 12-W	418	.15 Max.	12.0-14.0		W. 2.50-3.50
Allegheny L-12	420	Over .15	12.0-14.0		
	420F	Over .15	12.0-14.0		So. or Se. .07 Min. or Mo. .60 Max.
Allegheny 17	430	.12 Max.	14.0-18.0		
Allegheny 17-EZ	430F	.12 Max.	14.0-18.0		S. or Se. .07 Min. or Mo. .60 Max.
Allegheny 16-1	431	.15 Max.	14.0-18.0	2.0 Max.	
Allegheny 17-W	438	.12 Max.	16.0-18.0		W. 2.50-3.50
	439	.50-.65	8.0		W. 8.0
Allegheny M-17 / Allegheny H-17	440	Over .12	14.0-18.0		
	441	Over .15	14.0-18.0	2.0 Max.	
Allegheny 21	442	.35 Max.	18.0-23.0		
Allegheny 28	446	.35 Max.	23.0-30.0		
Allegheny 46	501	Over .10	4.0- 6.0		
	502	.10 Max.	4.0- 6.0		

STANDARD STAINLESS STEEL SHEET AND PLATE FINISHES

No. 1 finish is hot rolled, annealed and pickled.

No. 2B finish is annealed, pickled and cold rolled.

No. 4 finish is standard bright ground and polished.

Sheets 168
Pluramelt 172
Plates 172
Bars 173
Bolts, Screw etc. 180
Tubing 182
Pipe 186
Stainless 167
Tubing 189
Blr. Tube Babbit 203
Rod 213
Bolt Reir 22
Data 243

ALLEGHENY METAL 18-8 STAINLESS

SHEETS—No. 4 FINISH—Type Nos. 302-304

Annealed, Polished One Side, Stretcher Leveled and Resquared

Stainless Steel Ga. & Size In.	Est. Wt. Per Sheet
3-16(.1875") Wt. per Sq. Ft. 7.75	
36x 96	186.0
48x120	310.0
No. 10(.141") Wt. per Sq. Ft. 5.91	
36x120	177.2
48x120	236.2
54x144	Chgo. 318.9
No. 11(.125") Wt. per Sq. Ft. 5.25	
30x 96	105.0
36x 96	126.0
36x120	157.5
48x 96	168.0
48x120	210.0
No. 12(.109") Wt. per Sq. Ft. 4.59	
30x120	Buff. 114.8
36x 96	110.2
36x120	137.8
42x120	Bost. 160.8
48x 96	146.9
48x120	183.7
No. 13(.094") Wt. per Sq. Ft. 3.94	
36x 96	94.5
48x120	157.5
No. 14(.078") Wt. per Sq. Ft. 3.28	
30x 96	65.6
30x120	82.0
36x 96	78.7
36x120	98.4
42x 96	N.Y. 91.9
42x120	114.8
48x 96	104.9
48x120	131.2
48x144	Chgo. 157.5
60x144	N.Y. 196.9
No. 16(.063") Wt. per Sq. Ft. 2.63	
24x 96	42.0
30x 96	52.5
30x120	65.6
36x 96	63.0
36x120	78.8
42x120	Chgo. 91.9
48x 96	84.0
48x120	105.0
No. 18(.050") Wt. per Sq. Ft. 2.10	
24x 96	Bost. 33.6
30x 96	42.0
30x120	52.5
36x 96	50.4
36x120	63.0

Stainless Steel Ga. & Size In.	Est. Wt. Per Sheet
No. 18(.050") Wt. per Sq. Ft. 2.10	
42x120	Chgo. 73.5
48x 96	67.2
48x120	84.0
No. 19(.044") Wt. per Sq. Ft. 1.84	
36x 96	44.1
36x120	55.1
48x 96	58.8
48x120	73.50
No. 20(.038") Wt. per Sq. Ft. 1.58	
24x 96	25.2
30x 96	31.5
30x120	39.4
36x 96	37.8
36x120	47.2
36x144	56.7
42x120	Chgo. 55.1
48x 96	50.4
48x120	63.0
60x 96	63.0
No. 22(.031") Wt. per Sq. Ft. 1.31	
24x 96	21.0
24x120	26.3
30x 96	26.3
30x120	32.8
36x 96	31.5
36x120	39.4
40x120	Bost. 43.7
48x 96	42.0
48x120	52.5
No. 24(.025") Wt. per Sq. Ft. 1.05	
24x 96	16.8
24x120	21.0
30x 96	21.0
30x120	26.3
36x 96	25.2
36x120	31.5
40x120	35.0
48x 96	33.6
48x120	N.Y. 42.0
No. 25(.022") Wt. per Sq. Ft. .919	
36x 96	22.0
48x120	42.0
No. 26(.019") Wt. per Sq. Ft. .788	
24x 96	12.6
30x 96	15.8
30x120	20.0
36x 96	18.9
36x120	23.6
48x 96	25.2

Stainless Steel Sheets in larger sizes can be shipped from mill.
For Stainless Steel type numbers and analyses see page 167.

ALLEGHENY METAL 18-8 STAINLESS

SHEETS—No. 2B FINISH—Type Nos. 302-304

Cold Rolled, Annealed and Pickled

Stainless Steel Ga. & Size Inches	Est. Wt. per Sheet
3-16"—See Plates	
No. 10(.141") Wt. per Sq. Ft. 5.91	
36x 96	141.7
36x120	177.2
48x120	236.2
No. 11(.125") Wt. per Sq. Ft. 5.25	
30x 96	105.0
36x 96	126.0
36x120	157.5
48x 96	168.0
48x120	210.0
48x144	Chgo. 252.0
No. 12(.109") Wt. per Sq. Ft. 4.59	
36x 96	110.2
36x120	137.8
48x 96	146.9
48x120	183.7
No. 13(.094") Wt. per Sq. Ft. 3.94	
36x 96	94.5
48x120	157.5
No. 14(.078") Wt. per Sq. Ft. 3.28	
30x 96	65.6
36x 96	78.7
36x120	98.4
44x120	120.3
48x 96	104.9
48x120	131.2
60x144	Chgo. 196.9
No. 16(.063") Wt. per Sq. Ft. 2.63	
24x120	52.5
30x 96	52.5
30x120	Chgo. 65.6
36x 96	63.0
36x120	78.8
48x 96	84.0
48x120	105.0
No. 18(.050") Wt. per Sq. Ft. 2.10	
24x120	42.0
30x 96	42.0
30x120	N.Y. 52.5
36x 96	50.4
36x120	63.0
48x 96	67.2
48x120	84.0
No. 19(.044") Wt. per Sq. Ft. 1.84	
36x 96	44.1
36x120	55.1
48x120	73.5
No. 20(.038") Wt. per Sq. Ft. 1.58	
24x 96	25.2
24x120	31.5
30x 96	31.5
30x120	39.4
36x 96	37.8
36x120	47.3
48x 96	50.4
48x120	63.0
No. 22(.031") Wt. per Sq. Ft. 1.31	
24x 96	N.Y. 21.0
24x120	26.3
30x 96	26.3
30x120	32.8
36x 96	31.5
36x120	39.4
48x 96	42.0
48x120	52.5
No. 24(.025") Wt. per Sq. Ft. 1.05	
24x 96	16.8
24x120	21.0
30x 96	21.0
30x120	Chgo. 26.3
36x 96	25.2
36x120	31.5
42x 96	29.4
48x 96	33.6
48x120	42.0
No. 25(.022") Wt. per Sq. Ft. .919	
24x120	18.4
30x 96	18.4
36x 96	22.0
48x 96	29.4
No. 26(.019") Wt. per Sq. Ft. .788	
24x 96	12.6
24x120	15.8
30x 96	15.8
30x120	20.0
36x 96	18.9
36x120	23.6
48x 96	25.2
No. 28(.016") Wt. per Sq. Ft. .656	
36x 96	N.Y. 15.8

ALLEGHENY METAL 25-12 STAINLESS

SHEETS—No. 2 FINISH—Type No. 309

Cold Rolled, Annealed and Pickled

Shipped from our Buffalo Plant

Stainless Steel Ga. & Size Inches	Est. Wt. per Sheet
No. 11x36x120	157.5
No. 14x36x120	98.4
No. 16x36x120	78.8
48x120	105.0

ALLEGHENY METAL 18-8 M STAINLESS

SHEETS—No. 2B FINISH—Type No. 316

Cold Rolled, Annealed and Pickled

Stainless Steel Ga. & Size Inches	Est. Wt. per Sheet
No. 10x48x120	N.Y. 236.2
No. 11x48x120	210.0
No. 12x36x120	N.Y. 137.8
48x120	N.Y. 183.7
No. 14x36x120	N.Y. 98.4
48x120	Chgo. 131.2
No. 16x36x120	N.Y. 78.7
No. 16x48x120	105.0
No. 18x48x120	Chgo. 84.0
No. 20x48x120	Chgo. 63.0
No. 22x36x 96	Chgo. 31.5
No. 24x36x 96	Chgo. 25.2
No. 26x36x 96	Chgo. 18.9

ALLEGHENY METAL 18-8M SPEC. STAINLESS

SHEETSNo. 2B FINISH—Type No. 317

Cold Rolled, Annealed and Pickled

Shipped from our Boston Plant

Stainless Steel Ga. & Size Inches	Est. Wt. Per Sheet
No. 11x48x120	210.0
No. 12x48x120	183.7
No. 14x36x120	98.4
No. 14x48x120	131.2
No. 16x48x120	105.0

ALLEGHENY 12 STAINLESS

(10% to 14% Chrome Alloy)

This type of Stainless is carried in standard analyses in sheets and in both standard and free machining analysis in bars. The free machining composition does not lend itself to welding by either the electric arc or oxy-acetylene process. Allegheny 12 contains high chrome, but no specified nickel content and is intended for mild corrosion and medium high temperature applications.

SHEETS—WHITE FINISH

Smooth Rolled, Annealed and Pickled

Stainless Steel Ga. & Size Inches	Est. Wt. per Sheet
No. 11(.125") Wt. per Sq. Ft. 5.15	
36x 96	N.Y. 123.6
48x120	N.Y. 206.0
No. 12(.109") Wt. per Sq. Ft. 4.51	
36x 96	Chgo. 108.2
48x120	Chgo. 180.3
No. 14(.078") Wt. per Sq. Ft. 3.22	
36x 96	N.Y. 77.2
No. 16(.063") Wt. per Sq. Ft. 2.58	
36x 96	N.Y. 61.8
48x120	Chgo. 103.0
No. 18(.050") Wt. per Sq. Ft. 2.06	
36x 96	49.4
48x120	N.Y. 82.4
No. 20(.038") Wt. per Sq. Ft. 1.55	
36x 96	37.1
No. 22(.031") Wt. per Sq. Ft. 1.2[illegible]	
36x 96	30.9
No. 24(.025") Wt. per Sq. Ft. 1.03	
36x 96	24.7

Stainless Steel Sheets in larger sizes can be shipped from mill.

For Stainless Steel type numbers and analyses see page 167.

ALLEGHENY 17 STAINLESS

(14% to 18% Chrome Alloy)

This is a chrome-iron stainless highly resistant to chemical and atmospheric corrosion and to oxidation up to 1600° F. Polished sheets are widely used for decorative purposes. Is particularly resistant to nitric acid. Successfully withstands heavy scaling at temperatures up to about 1600° F.

SHEETS—No. 4 FINISH—Type No. 430

Annealed, Polished One Side

Stainless Steel Ga. & Size Inches	Est. Wt. Per Sheet	Stainless Steel Ga. & Size Inches	Est. Wt. Per Sheet
No. 20(.038") Wt. per Sq. Ft. 1.55		No. 24(.025") Wt. per Sq. Ft. 1.03	
36x 96	37.10	36x 96	24.72
No. 22(.031") Wt. per Sq. Ft. 1.29		36x120	N.Y. 30.90
36x 96	30.90	No. 26(.019") Wt. per Sq. Ft. .773	
No. 24(.025") Wt. per Sq. Ft. 1.03		30x 96	N.Y. 15.45
30x 96	N.Y. 20.60	36x 96	17.80
		36x120	Det. 23.18

SHEETS—No. 2 FINISH—Type No. 430

Cold Rolled, Annealed and Pickled

Stainless Steel Ga. & Size Inches	Est. Wt. Per Sheet	Stainless Steel Ga. & Size Inches	Est. Wt. Per Sheet
No. 22x30x 96	25.80	**No. 26**x24x 96	12.37
36x 96	30.90	30x 96	15.45
		30x120	19.33
No. 24x36x120	30.90	36x120	23.18

ALLEGHENY METAL 18-8 STAINLESS

STRIP—No. 4 PINCH PASS TEMPER—Type No. 302

Cold Rolled, Annealed

Type No. 304 can also be furnished in most sizes.

Thickness in Inches	Size in Inches	Est. Wt. Per Sheet	Thickness in Inches	Size in Inches	Est. Wt. Per Sheet
.010	12x120	4.20	.025	24x120	21.00
.012	12x120	5.04	.031	24x120	26.00
.015	12x120	7.88	.037	24x120	31.10
.018	24x120	15.00	.050	24x120	42.00
.020	24x120	16.80	.062	24x120	52.50

COLD ROLLED, SPRING TEMPER DIAPHRAGM STEEL—Type No. 302

Shipped from our Chicago Plant

Allegheny Metal 18-8 Stainless diaphragm steel is a cold rolled, smooth finished steel used for pressure diaphragms in Control Valves and similar applications.

This steel is rolled to spring temper. The tensile strength is about 175,000 lbs. per square inch.

Furnished in straight lengths of 10′0″, about 0.007″ thick x 10½″ wide.

For Stainless Steel type numbers and analyses, see page 167.

Tubing 189
Blr. Tube Babbit 203
Welding Rod 213
Bolt Reir 22.
Data 243

PLURAMELT STAINLESS STEEL

Shipped from our New York Plant

A perfectly fused and bonded stainless surfaced mild steel made by a new melting technique. Pluramelt steel can be fabricated—drawn, spun, bent, punched, annealed, etc.—without the slightest separation of the alloy from the base metal. Sheets are carried in stock as shown below. Other products requiring a stainless steel surface on either one side or both sides, can be supplied. Write for complete information.

SHEETS—STAINLESS ONE SIDE, No. 4 FINISH

Type No. 304

(Stainless Steel approximately 20% of total thickness)

Stainless Steel Ga. and Size In.	Est. Wt. Per Sheet	Stainless Steel Ga. and Size In.	Est. Wt. Per Sheet
No. 16x36x120	76.9	**No. 14**x36x120	96.2

ALLEGHENY METAL STAINLESS

PLATES—No. 1 FINISH

Hot Rolled, Annealed and Pickled

3/16" and 1/4" available in Type Nos. 302-304-308.
5/16" available in Type Nos. 302-304.
3/8" available in Type Nos. 302-304-308.
1/2" available in Type Nos. 302-304-308-347.

Thick-ness, Inches	Size in Inches	Wt. Per Square Ft. Lbs.	Thick-ness, Inches	Size in Inches	Wt. per Square Ft. Lbs.
3/16	36x 96	7.752	5/16	60x144	12.920
	48x120	7.752	3/8	60x144	15.503
	60x144	7.752			
1/4	60x144	10.336	1/2	60x144	20.671

ALLEGHENY METAL 25-12 STAINLESS

PLATES—No. 1 FINISH—Type No. 309

Hot Rolled, Annealed and Pickled

Shipped from our Buffalo Plant

Thick-ness, Inches	Size in Inches	Wt. per Square Ft. Lbs.	Thick-ness, Inches	Size in Inches	Wt. per Square Ft. Lbs.
3/16	48 x120	7.752	3/8	48x120	15.503
1/4	49¾x120	10.336	1/2	48x120	20.671

ALLEGHENY METAL 18-8M STAINLESS

PLATES—No. 1 FINISH—Type No. 316

Hot Rolled, Annealed and Pickled

Thick-ness, Inches	Size in Inches	Wt. per Square Ft. Lbs.	Thick-ness, Inches	Size in Inches	Wt. per Square Ft. Lbs.
3/16	36x 96	7.752	1/4	48x144	N.Y. 10.336
	48x144	N.Y. 7.752	1/4	60x144	N.Y. 10.336
	60x156	7.752	3/8	48x144	N.Y. 15.503

For Stainless Steel type numbers and analyses, see page 167.

ALLEGHENY METAL 18-8M SPEC. STAINLESS

PLATES—No. 1 FINISH—Type No. 317

Hot Rolled, Annealed and Pickled

Shipped from our Boston Plant

Thickness, Inches	Size in Inches	Wt. per Square Ft. Lbs.	Thickness, Inches	Size in Inches	Wt. per Square Ft. Lbs.
3/16	60x144	7.752	1/4	60x144	10.336
1/4	48x120	10.336	3/8	60x144	15.503

ALLEGHENY 12 STAINLESS

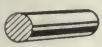
PLATES—No. 1 FINISH—Type No. 410

Hot Rolled, Annealed and Pickled

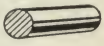
Shipped from our Chicago Plant

Thickness, Inches	Size in Inches	Wt. per Sq. Ft. Lbs.
3/16	48x120	7.590

ALLEGHENY METAL 18-8 STAINLESS



ROUNDS—ANNEALED, GROUND AND POLISHED



Type Nos. 302-304

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
1/4	0.17	12 to 16	1/2	0.67	12 to 16	7/8	2.04	12 to 16
5/16	0.26	12 to 16	5/8	1.04	12 to 16	1	2.67	12 to 16
3/8	0.38	12 to 16	3/4	1.50	12 to 16			

ROUNDS—ANNEALED AND GROUND

Type Nos. 302-304

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
1/8	.094	12 to 16	7/8	2.04	12 to 16	1 3/4	8.18	12 to 16
1/4	0.17	12 to 16	1	2.67	12 to 16	1 7/8	9.39	12 to 16
5/16	0.26	12 to 16	1 1/8	3.38	12 to 16	2	10.68	12 to 16
3/8	0.38	12 to 16	1 1/4	4.17	12 to 16	2 1/4	13.52	Buff.
1/2	0.67	12 to 16	1 3/8	5.02	12 to 16	2 1/2	16.69	Buff.
5/8	1.04	12 to 16	1 1/2	6.01	12 to 16	2 3/4	20.20	Buff.
3/4	1.50	12 to 16	1 5/8	7.05	12 to 16	3	24.03	Buff.

ALLEGHENY METAL 18-8 EZ STAINLESS

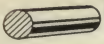
ROUNDS—HOT ROLLED, ANNEALED AND PICKLED, FREE MACHINING

Type No. 303

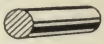
Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
1	2.68	12 to 16	1 7/8	9.39	12 to 16	2 3/4	20.20	12 to 16
1 1/8	3.38	12 to 16	2	10.68	12 to 16	3	24.03	12 to 16
1 1/4	4.17	12 to 16	2 1/8	12.06	12 to 16	3 1/4	28.20	12 to 16
1 3/8	5.02	12 to 16	2 1/4	13.52	12 to 16	3 1/2	32.71	12 to 16
1 1/2	6.01	12 to 16	2 3/8	15.07	12 to 16	4	42.73	12 to 16
1 5/8	7.05	12 to 16	2 1/2	16.69	12 to 16	4 1/2	54.07	12 to 16
1 3/4	8.18	12 to 16	2 5/8	18.40	12 to 16	5	66.76	N.Y.

Tubing 189
Blr. Tube Babbit 203
Weldin Rod 213
Bolt Reir 22
Data 243

ALLEGHENY METAL 18-8 EZ STAINLESS



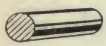
ROUNDS—ANNEALED AND GROUND
FREE MACHINING



Type No. 303

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
1/16	.010	12 to 16	3/4	1.51	12 to 16	2 1/16	12.78	12 to 16
3/32	.024	12 to 16	13/16	1.77	12 to 16	2 1/4	13.52	12 to 16
7/64	.032	12 to 16	7/8	2.06	12 to 16	2 5/16	14.28	Chgo.
1/8	.042	12 to 16	15/16	2.36	12 to 16	2 3/8	15.07	12 to 16
9/64	.053	12 to 16	1	2.68	12 to 16	2 7/16	15.86	12 to 16
5/32	.068	12 to 16	1 1/16	3.01	12 to 16	2 1/2	16.69	12 to 16
.164	.074	12 to 16	1 1/8	3.38	12 to 16	2 9/16	17.53	N.Y.
11/64	.079	12 to 16	1 3/16	3.76	12 to 16	2 5/8	18.40	12 to 16
3/16	.097	12 to 16	1 1/4	4.17	12 to 16	2 3/4	20.20	12 to 16
7/32	.128	12 to 16	1 5/16	4.60	12 to 16	2 7/8	22.07	12 to 16
1/4	.168	12 to 16	1 3/8	5.02	12 to 16	2 15/16	23.04	12 to 16
9/32	.212	12 to 16	1 7/16	5.52	12 to 16	3	24.03	12 to 16
5/16	.262	12 to 16	1 1/2	6.01	12 to 16	3 1/8	26.08	N.Y.
11/32	.316	12 to 16	1 9/16	6.52	12 to 16	3 1/4	28.20	12 to 16
3/8	.378	12 to 16	1 5/8	7.05	12 to 16	3 3/8	30.42	12 to 16
13/32	.441	12 to 16	1 11/16	7.60	12 to 16	3 1/2	32.71	12 to 16
7/16	.514	12 to 16	1 3/4	8.18	12 to 16	3 3/4	37.55	12 to 16
15/32	.587	12 to 16	1 13/16	8.77	N.Y.	4	42.73	12 to 16
1/2	.671	12 to 16	1 7/8	9.39	12 to 16	4 1/2	54.07	12 to 16
17/32	.754	12 to 16	1 15/16	10.02	12 to 16	5	66.76	12 to 16
9/16	.850	12 to 16	2	10.68	12 to 16	5 1/2	80.77	N.Y.
5/8	1.05	12 to 16	2 1/16	11.36	12 to 16	6	96.14	N.Y.
11/16	1.27	12 to 16	2 1/8	12.06	12 to 16			

ALLEGHENY METAL 25-12 STAINLESS



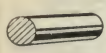
ROUNDS—ANNEALED and GROUND

Type No. 309

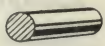
Shipped from our Chicago and Boston Plants

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
1/4	.168	12 to 16	1 1/4	4.17	12 to 16	2	10.68	12 to 16
1/2	.671	12 to 16	1 3/8	5.02	12 to 16	2 1/4	13.52	12 to 16
5/8	1.05	12 to 16	1 1/2	6.01	12 to 16	2 1/2	16.69	12 to 16
3/4	1.51	12 to 16	1 3/4	8.18	12 to 16	2 3/4	20.20	12 to 16
1	2.68	12 to 16						

ALLEGHENY METAL 18-8 M STAINLESS



ROUNDS—ANNEALED and GROUND



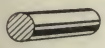
Type No. 316

Shipped from our Chicago Plant

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
1/4	.168	10 to 12	5/8	1.05	10 to 12	1 1/4	4.17	10 to 12
5/16	.262	10 to 12	3/4	1.51	10 to 12	1 1/2	6.01	10 to 12
3/8	.378	10 to 12	7/8	2.06	10 to 12	1 3/4	8.18	10 to 12
7/16	.514	10 to 12	1	2.68	10 to 12	2	10.68	10 to 12
1/2	.671	10 to 12	1 1/8	3.38	10 to 12			

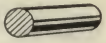
For Stainless Steel type numbers and analyses, see page 167.

ALLEGHENY METAL 18-8 M SPEC. STAINLESS



ROUNDS—ANNEALED and GROUND

Type No. 317



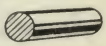
Shipped from our Boston Plant

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
1/4	.168	12 to 16	3/4	1.51	12 to 16	1 1/2	6.01	12 to 16
3/8	.378	12 to 16	7/8	2.06	12 to 16	1 3/4	8.18	12 to 16
1/2	.671	12 to 16	1	2.68	12 to 16	2	10.68	12 to 16
5/8	1.05	12 to 16	1 1/4	4.17	12 to 16			

ALLEGHENY METAL 18-8 C STAINLESS

ROUNDS—ANNEALED and GROUND

Type No. 347

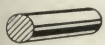


Shipped from our Chicago Plant

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
1/16	.097	12 to 16	5/8	1.05	12 to 16	1 1/16	3.01	12 to 16
1/4	.168	12 to 16	11/16	1.27	12 to 16	1 1/8	3.38	12 to 16
5/16	.262	12 to 16	3/4	1.51	12 to 16	1 1/4	4.17	12 to 16
3/8	.378	12 to 16	7/8	2.06	12 to 16	1 3/8	5.02	12 to 16
7/16	.514	12 to 16	15/16	2.36	12 to 16	1 1/2	6.01	12 to 16

ALLEGHENY 12 EZ STAINLESS

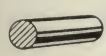
(12% to 14% Chrome Alloy)



ROUNDS—ANNEALED and GROUND FREE MACHINING

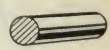
Type No. 416

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
3/32	.024	12 to 16	3/4	1.50	12 to 16	2 1/8	12.06	N.Y.
1/8	.042	12 to 16	13/16	1.76	12 to 16	2 1/4	13.52	12 to 16
5/32	.065	12 to 16	7/8	2.05	12 to 16	2 3/8	15.06	N.Y.
3/16	.094	12 to 16	15/16	2.35	12 to 16	2 1/2	16.69	12 to 16
7/32	.128	12 to 16	1	2.67	12 to 16	2 5/8	18.40	N.Y.
1/4	.167	12 to 16	1 1/16	3.01	12 to 16	2 3/4	20.20	Bost.
9/32	.211	12 to 16	1 1/8	3.38	12 to 16	2 7/8	22.07	N.Y.
5/16	.261	12 to 16	1 1/4	4.17	12 to 16	3	24.03	N.Y.
11/32	.316	12 to 16	1 3/8	5.05	12 to 16	3 1/8	26.08	N.Y.
3/8	.376	12 to 16	1 7/16	5.52	Chgo.	3 1/4	28.21	N.Y.
7/16	.511	12 to 16	1 1/2	6.01	12 to 16	3 3/8	30.42	Chgo.
1/2	.668	12 to 16	1 5/8	7.05	12 to 16	3 1/2	32.71	N.Y.
9/16	.845	12 to 16	1 3/4	8.18	12 to 16	3 3/4	37.56	Chgo.
5/8	1.04	12 to 16	1 7/8	9.39	N.Y.	4	42.73	Chgo.
11/16	1.26	12 to 16	2	10.68	12 to 16			



ROUNDS—HOT ROLLED, ANNEALED AND PICKLED, FREE MACHINING

Type No. 416

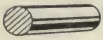


Shipped from our New York and Chicago Plants

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
1/2	.671	12 to 16	1 3/8	5.02	12 to 16	2 3/4	20.20	12 to 16
5/8	1.05	12 to 16	1 1/2	6.01	12 to 16	3	24.03	12 to 16
3/4	1.51	12 to 16	1 5/8	7.05	12 to 16	3 1/4	28.20	12 to 16
7/8	2.06	12 to 16	1 3/4	8.18	12 to 16	3 1/2	32.71	12 to 16
1	2.68	12 to 16	2	10.68	12 to 16	3 3/4	37.56	12 to 16
1 1/8	3.38	12 to 16	2 1/4	13.52	12 to 16	4	42.73	12 to 16
1 1/4	4.17	12 to 16	2 1/2	16.69	12 to 16			

Tubing 189
Blr. Tube Babbit 203
Welding Rod 213
Bolt Reir 22
Data 243
Co

ALLEGHENY 17 EZ STAINLESS



ROUNDS—ANNEALED AND GROUND, FREE MACHINING

Type No. 430F

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
5/16	.094	12 to 16	1/2	.671	12 to 16	7/8	2.06	12 to 16
1/4	.168	12 to 16	9/16	.850	12 to 16	1	2.68	12 to 16
11/16	.262	12 to 16	5/8	1.05	12 to 16	1 1/16	3.01	12 to 16
3/8	.378	12 to 16	3/4	1.51	12 to 16	1 1/8	3.38	12 to 16
7/16	.514	12 to 16						

ALLEGHENY METAL 18-8 STAINLESS

SQUARES—HOT ROLLED, ANNEALED AND PICKLED

Type Nos. 302-304

Size in Inches	Est. Wt. Per Ft.	Random Lengths Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths Ft.
*1/8	.053	12 to 16	*3/4	1.92	12 to 16
3/16	.120	12 to 16	*7/8	2.62	12 to 16
*1/4	.214	12 to 16	*1	3.42	12 to 16
*5/16	.334	12 to 16	1 1/8	4.30	12 to 16
*3/8	.481	12 to 16	*1 1/4	5.31	12 to 16
7/16	.655	12 to 16	*1 1/2	7.65	12 to 16
*1/2	.855	12 to 16	1 3/4	10.41	12 to 16
9/16	1.08	12 to 16	2	13.60	12 to 16
*5/8	1.33	12 to 16			

* These sizes can also be furnished in Cold Drawn Finish.

ALLEGHENY METAL 18-8 EZ STAINLESS

SQUARES—COLD DRAWN, ANNEALED AND PICKLED, FREE MACHINING

Type No. 303

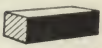
Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
1/8	.053	12 to 16	1/2	.855	12 to 16	1 1/8	4.30	N.Y.
3/16	.120	12 to 16	9/16	1.08	N.Y.	1 1/4	5.31	12 to 16
1/4	.214	12 to 16	5/8	1.33	12 to 16	1 1/2	7.65	12 to 16
5/16	.334	12 to 16	3/4	1.92	12 to 16	1 3/4	10.41	N.Y.
3/8	.481	12 to 16	7/8	2.62	12 to 16	2	13.60	N.Y.
7/16	.655	12 to 16	1	3.42	12 to 16			

ALLEGHENY 12 EZ STAINLESS

(12% to 14% Chrome Alloy)

SQUARES—COLD DRAWN, ANNEALED AND PICKLED, FREE MACHINING

Type No. 416



Shipped from our Chicago Plant

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
3/4	1.92	12 to 16	1 1/8	4.30	12 to 16	1 3/4	10.41	12 to 16
7/8	2.62	12 to 16	1 1/4	5.31	12 to 16	2	13.60	12 to 16
1	3.42	12 to 16	1 1/2	7.65	12 to 16			

ALLEGHENY METAL 18-8 EZ STAINLESS

HEXAGONS—COLD DRAWN, ANNEALED AND PICKLED, FREE MACHINING

Type No. 303

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
1/4	.184	12 to 16	3/4	1.66	12 to 16	1 3/8	5.57	12 to 16
5/16	.287	12 to 16	13/16	1.94	12 to 16	1 7/16	6.08	12 to 16
3/8	.414	12 to 16	7/8	2.25	12 to 16	1 1/2	6.62	12 to 16
7/16	.564	12 to 16	15/16	2.59	12 to 16	1 5/8	7.77	12 to 16
1/2	.736	12 to 16	1	2.94	12 to 16	1 3/4	9.02	12 to 16
9/16	.932	12 to 16	1 1/16	3.32	12 to 16	1 7/8	10.35	12 to 16
5/8	1.15	12 to 16	1 1/8	3.73	12 to 16	2	11.78	12 to 16
11/16	1.39	12 to 16	1 1/4	4.60	12 to 16	2 1/2	18.40	N.Y.

ALLEGHENY METAL 18-8 M SPEC. STAINLESS

HEXAGONS—HOT ROLLED, ANNEALED AND PICKLED

Type No. 317

Shipped from our Boston Plant

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
1/2	.736	12 to 16	7/8	2.29	12 to 16	1 7/16	6.06	12 to 16
9/16	.932	12 to 16	1	2.94	12 to 16	1 1/2	6.62	12 to 16
5/8	1.15	12 to 16	1 1/16	3.32	12 to 16	1 9/16	7.19	12 to 16
11/16	1.39	12 to 16	1 1/4	4.60	12 to 16	1 5/8	7.78	12 to 16
3/4	1.66	12 to 16						

ALLEGHENY 12 EZ STAINLESS

(12% to 14% Chrome Alloy)

HEXAGONS—COLD DRAWN, ANNEALED AND PICKLED, FREE MACHINING

Type No. 416

Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.	Size in Inches	Est. Wt. Per Ft.	Random Lengths, Ft.
1/4	.184	10 to 16	11/16	1.39	10 to 16	1 1/4	4.60	10 to 16
5/16	.287	10 to 16	3/4	1.66	10 to 16	1 3/8	5.57	N.Y.
3/8	.414	10 to 16	13/16	1.94	10 to 16	1 1/2	6.62	N.Y.
7/16	.564	10 to 16	7/8	2.25	10 to 16	1 5/8	7.77	N.Y.
1/2	.736	10 to 16	1	2.94	10 to 16	1 3/4	9.02	N.Y.
9/16	.932	10 to 16	1 1/16	3.32	10 to 16	2	11.78	N.Y.
5/8	1.15	10 to 16	1 1/8	3.73	10 to 16			

STAINLESS STEEL POLISHING POWDER

Excellent for removing heat tint after soldering, also for removing finger prints and dirt from the polished surface of Allegheny Stainless which has become marked from handling in fabricating operations. Will not scratch the material and leaves surface as bright, if not brighter than the original finish.

Carried in stock in 1 and 5 pound cans. Write for sample.

For Stainless Steel type numbers and analyses, see page 167.

Tubing 189
Blr. Tube Babbit 203
Welding Rod 213
Bolt Reir 22
Data 243

ALLEGHENY METAL 18-8 STAINLESS

FLATS—HOT ROLLED, ANNEALED AND PICKLED

Type Nos. 302-304

Size in Inches	Est. Wt. Per Ft.	Random Lengths Ft.
1/8 x 1/2	.2125	12 to 16
5/8	.2656	12 to 16
3/4	.3188	12 to 16
1	.4250	12 to 16
1 1/4	.5312	12 to 16
1 1/2	.638	12 to 16
2	.850	12 to 16
2 1/2	1.06	12 to 16
3	1.28	12 to 16
3/16 x 1/4	.160	N.Y.
1/2	.319	12 to 16
5/8	.398	12 to 16
3/4	.478	12 to 16
7/8	.558	12 to 16
1	.638	12 to 16
1 1/4	.797	12 to 16
1 1/2	.957	12 to 16
1 3/4	1.15	12 to 16
2	1.28	12 to 16
2 1/2	1.59	N.Y.
3	1.91	12 to 16
1/4 x 1/2	.425	12 to 16
5/8	.531	12 to 16
3/4	.636	12 to 16
1	.850	12 to 16
1 1/4	1.06	12 to 16
1 3/8	1.17	12 to 16
1 1/2	1.28	12 to 16
1 3/4	1.49	12 to 16
2	1.70	12 to 16
2 1/2	2.12	12 to 16
3	2.55	12 to 16
4	3.40	12 to 16
5	4.25	12 to 16
6	5.10	N.Y.
3/8 x 1/2	.638	12 to 16
3/4	.957	12 to 16
1	1.28	12 to 16
1 1/4	1.59	12 to 16
1 1/2	1.92	12 to 16
1 3/4	2.23	12 to 16
2	2.55	12 to 16
2 1/2	3.19	12 to 16
3/8 x 3	3.83	12 to 16
4	5.10	12 to 16
5	6.38	12 to 16
6	7.65	12 to 16
7/16 x 3/4	1.116	12 to 16
1/2 x 5/8	1.06	12 to 16
3/4	1.28	12 to 16
7/8	1.49	N.Y.
1	1.70	12 to 16
1 1/4	2.13	12 to 16
1 1/2	2.55	12 to 16
2	3.40	12 to 16
2 1/2	4.25	12 to 16
3	5.10	12 to 16
4	6.80	12 to 16
5	8.50	N.Y.
6	10.20	12 to 16
5/8 x 3/4	1.59	12 to 16
1	2.13	12 to 16
1 1/4	2.66	12 to 16
1 1/2	3.19	12 to 16
2	4.25	12 to 16
2 1/2	5.31	N.Y.
3	6.38	12 to 16
4	8.50	12 to 16
6	12.75	12 to 16
3/4 x 1	2.55	12 to 16
1 1/4	3.19	12 to 16
1 1/2	3.83	12 to 16
2	5.10	12 to 16
2 1/2	6.38	12 to 16
3	7.65	12 to 16
4	10.20	12 to 16
5	12.75	12 to 16
6	15.30	12 to 16
1 x 1 1/4	4.25	12 to 16
1 1/2	5.10	12 to 16
1 3/4	5.95	12 to 16
2	6.80	12 to 16
2 1/2	8.50	12 to 16
3	10.20	12 to 16
4	13.60	12 to 16
6	20.40	12 to 16

STAINLESS STEEL WIRE ROPE

Stainless (18-8) wire rope can be furnished promptly in several of the standard wire rope constructions. Stainless wire rope resists the corrosive effects of alkalies and salts, many acids, corrosive fumes and moisture. It has unusual resistance to high temperatures together with excellent physical properties. Write for complete data.

STAINLESS STEEL WELDING ROD

McKay Stainless Steel Welding Rods, representing an entirely new development in Stainless Steel Welding, are carried in stock for Immediate Shipment. See Welding Rod Section for complete description and list of types and sizes carried.

ALLEGHENY METAL 18-8 STAINLESS

HEXAGON NUTS

U. S. S. Coarse Cut Thread

3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	N.Y. 1 1/4

RIVETS—BRIGHT ANNEALED

Type No. 302

Round Head—Countersunk Head—Flat Head

Standard Sizes

Dia. Inches	Lgth. Inches	Dia. Inches	Lgth. Inches	Dia. Inches	Lgth. Inches	Dia. Inches	Lgth. Inches
1/8 x	3/16	3/16 x	1/2	1/4 x	1/2	5/16 x	1
	1/4		5/8		5/8		1 1/4
	3/8		3/4		3/4		1 1/2
	1/2		1		1	3/8 x	3/4
	5/8		1 1/4		1 1/4		1
	3/4		1 1/2		1 1/2		1 1/4
	1	1/4 x	1/4	5/16 x	1/2		1 1/2
3/16 x	1/4		3/8		3/4		2
	3/8						

Standard sizes not listed can be furnished promptly.

HEXAGON HEAD CAP SCREWS

Type No. 302

Shipped from our New York Plant

Cold Upset—American Standard—U.S.S. Coarse cut thread—Washer face under head—List price per 100 pieces—without nuts.

Diameter in Inches	1/4	5/16	3/8	1/2	5/8	3/4
Threads per Inch	20	18	16	13	11	10
Length in Inches						
1/2	11.60					
3/4	12.35	16.10	18.35	26.10	....	....
1	13.13	16.75	18.95	27.10	37.08	....
1 1/4	13.94	17.35	19.60	28.21	38.90	....
1 1/2	14.80	18.00	20.24	29.36	40.37	58.30
1 3/4	15.85	18.80	21.00	30.80	42.20	....
2	16.47	19.31	21.54	31.64	43.62	63.60
2 1/4	....	....	22.83	....	....	68.00
2 1/2			22.83	34.00	46.91	68.00
2 3/4	....	....	24.12	36.32	....	....
3	....	....	24.12	36.32	50.26	....
3 1/2				38.65		

Discounts on application. Other standard sizes can also be furnished.

ALLEGHENY METAL 18-8 STAINLESS

ANGLES—HOT ROLLED, ANNEALED AND PICKLED

Type Nos. 302-304

Size in Inches	Approx. Wt. Per Ft., Lbs.	Random Lengths Ft.	Size in Inches	Approx. Wt. Per Ft., Lbs.	Random Lengths Ft.
3/4 x 3/4 x 1/8	.59	Chgo.	2 x2 x 1/8	1.65	16 to 22
1 x1 x 1/8	.80	16 to 22	3/16	2.44	16 to 22
3/16	1.16	16 to 22	1/4	3.19	16 to 22
1 1/4 x1 1/4 x 1/8	1.01	16 to 22	2 1/2 x2 1/2 x 1/8	2.08	N.Y. 16
3/16	1.48	16 to 22	3/16	3.07	16 to 22
1 1/2 x1 1/2 x 1/8	1.23	16 to 22	1/4	4.10	16 to 22
3/16	1.80	16 to 22	3 x3 x 1/4	4.90	16 to 22
1/4	2.34	16 to 22			

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ALLEGHENY METAL 18-8 STAINLESS

WASHERS

Type No. 302

Bolt Size Inches	Outside Diam., Inches	Size of Hole, Inches	Bolt Size Inches	Outside Diam., Inches	Size of Hole, Inches
3/16	7/16	13/64	5/8	1 3/4	11/16
1/4	3/4	5/16	3/4	2	13/16
5/16	7/8	3/8	7/8	2 1/4	15/16
3/8	1	7/16	1	2 1/2	1 1/16
1/2	1 3/8	9/16			

Standard sizes not listed can be furnished promptly.

LOCK WASHERS

Type No. 302

Shipped from our New York Plant

Bolt Size Inches	Section Width Inches	Section Thickness Inches	Bolt Size Inches	Section Width Inches	Section Thickness Inches
1/4	3/32	1/16	1/2	11/64	1/8
5/16	1/8	1/16	5/8	13/64	5/32
3/8	1/8	3/32			

HEXAGON HEAD MACHINE BOLTS

Type No. 302

Shipped from our New York Plant

American Standard—U.S.S. Coarse cut thread—Washer face under head—List Price per 100 pieces—without nuts.

Diameter in Inches	1/4	5/16	3/8	1/2	5/8	3/4
Threads per Inch	20	18	16	13	11	10
Length in Inches						
1/2	11.60					
3/4	12.35	16.10	18.35	26.10	....	....
1	13.13	16.75	18.95	27.10	37.08	....
1 1/4	13.94	17.35	19.60	28.21	38.90	....
1 1/2	14.80	18.00	20.24	29.36	40.37	58.30
1 3/4	15.85	18.80	21.00	30.80	42.20	....
2	16.47	19.31	21.54	31.64	43.62	63.60
2 1/4	....	....	....	....	....	68.00
2 1/2	....	....	22.83	34.00	46.91	68.00
2 3/4	....	....	24.12	36.32	....	....
3	....	....	....	36.32	50.26	....
3 1/2	....	....	....	38.65	....	....

Discounts on application

WELDING FLANGES

Shipped from our Plants as indicated

No.	A	B	C	D	E	F
3001A N.Y.	1/8"	1 1/2"	1/32"	3/64"	1 5/32"	3/32"
3002A Chgo.	1/4"	1 1/2"	3/32"	3/64"	1 5/32"	3/32"
3004A Chgo.	1/2"	1 7/8"	9/16"	3/64"	1 1/4"	3/32"
3006A Chgo.	3/4"	2"	5/8"	1/16"	1 9/32"	3/32"
3008A Chgo.	1"	2 1/4"	3/4"	1/16"	1 3/4"	3/16"
3010A Chgo.	1 1/4"	2 11/16"	3/4"	1/16"	1 7/8"	3/16"
3012A Chgo.	1 1/2"	3 3/64"	3/4"	1/16"	2 11/32"	3/16"
3016A Chgo.	2"	3 1/2"	3/4"	1/16"	2 23/32"	3/16"
3020A Bost.	2 1/2"	4 1/16"	1"	1/16"	3 3/16"	3/16"
3024A Bost.	3"	4 5/8"	1"	1/16"	3 11/16"	3/16"

ALLEGHENY METAL 18-8 STAINLESS

MACHINE SCREWS

Type No. 302

Shipped from our New York Plant

Round Head—U.S.S. Coarse Cut Thread

Diameter	No. 8	No. 10	No. 10	¼
Threads per Inch	32	32	24	20
Length Inches				
⅜	V	V		V
½	V	V	V	V
⅝	..	V	..	V
¾		V	V	V
1	..	V	..	V
1½				V

MACHINE SCREW PRESSED SQUARE NUTS

Type No. 302

Bolt Size	No. Thrds.	Width Inches	Thick. Inches	Bolt Size	No. Thrds.	Width Inches	Thick. Inches
8	32	11/32	.125	10	32	⅜	.125
10	24	⅜	.125	¼"	20	½	¼

Other standard sizes can also be furnished.

ROUND HEAD STOVE BOLTS

Type No. 302

Shipped from our New York Plant

3/16 x ½	¼x ⅜	¼x ¾	¼x1½
¾	½	1	

Other standard sizes can also be furnished.

STAINLESS STEEL SOLDER AND FLUX

We have developed special solders and flux for soldering Allegheny Metal and other Stainless Steels. These products may be depended upon to produce clean joints, averaging 6,000 to 8,000 lbs. tensile strength to the square inch.

STAINLESS STEEL CASTINGS

Alloy Castings are made to your specifications in any of the various corrosion, heat and abrasion resisting analyses. Modern electric furnaces offer unusually prompt service and special annealing equipment assures good machinability.

Castings ranging from small ornamental pieces to heavy intricate industrial equipment can be furnished rough, machined, or polished. Write for further details.

ALLEGHENY 12 STAINLESS RIVETS

Type No. 410—Bright Annealed

Flat head—3/16x⅜, 3/16x½, also 8 oz. Tinner's.

Round head—⅛x¼, ⅛x⅜, 3/16x⅜, 3/16x½.

Other sizes and types of heads can be furnished promptly.

For Stainless Steel type numbers and analyses, see page 167.

Tubing 189
Blr. Tube Babbit 203
Welding Rod 213
Bolt Reir 22
Data 243

ALLEGHENY METAL 18-8 STAINLESS SEAMLESS TUBING

Available in Type Nos. 302-304

Cold Drawn, Annealed and Pickled—Random Lengths

Size O.D.	Average Wall Thickness B.W. Gauge or Inches	Dec. Inches	Size I.D.	Wt. Per Ft., Lbs.	In Stock At
1/8	20	0.35	.055	0.336	Phil.
3/16	21	.032	.123	.0533	Phil.
	20	.035	.117	.0572	Phil.
1/4	20	.035	.180	.0804	Phil.
	18	.049	.152	.1052	Phil.
	16	.065	.120	.1284	Phil.
5/16	21	.032	.249	.0960	N.Y.
	20	.035	.242	.1039	Phil.
	18	.049	.214	.1382	Phil.
	16	.065	.182	.1722	Phil.
3/8	20	.035	.305	.1271	Phil.
	18	.049	.277	.1706	N.Y.
	16	.065	.245	.2152	Phil.
.405		.068	.269	.2447	Phil.
7/16	20	.035	.367	.1506	Phil.
	16	.065	.307	.2589	Phil.
1/2	20	.035	.430	.1738	Phil.
	18	.049	.402	.2306	Phil.
	16	.065	.370	.3020	Phil.
	13	.095	.310	.4109	Phil.
	11	.120	.260	.4870	Phil.
.540		.088	.364	.4248	Phil.
9/16	20	.035	.492	.1974	Phil.
	16	.065	.432	.3457	N.Y.
	13	.095	.372	.4728	Phil.
5/8	20	.035	.555	.2205	Phil.
	18	.049	.527	.3014	Phil.
	16	.065	.495	.3888	Phil.
	14	.083	.459	.4805	Phil.
	11	.120	.385	.6472	Phil.
.675		.091	.493	.5676	Phil.
11/16	20	.035	.617	.2441	Chgo.
	16	.065	.557	.4325	Phil.
3/4	20	.035	.680	.2673	Phil.
	19	.042	.666	.3176	Bost.
	18	.049	.652	.3668	Phil.
	16	.065	.620	.4755	Phil.
	14	.083	.584	.5913	N.Y.
	13	.095	.560	.6646	Phil.
	11	.120	.510	.8074	Phil.
.840		.109	.622	.8510	Phil.
7/8	20	.035	.805	.3140	Phil.
	18	.049	.777	.4323	Phil.
	16	.065	.745	.5623	Phil.
	11	.120	.635	.9676	Phil.
1	20	.035	.930	.3607	Phil.
	18	.049	.902	.4977	Phil.
	16	.065	.870	.6491	Phil.
	14	.083	.834	.8129	N.Y.
	13	.095	.810	.9182	Phil.
	12	.109	.782	1.037	Phil.
	11	.120	.760	1.128	Phil.
	3/16	.188	.625	1.630	Phil.
	1/4	.250	.500	2.003	N.Y.
.050	..	.113	.824	1.131	Phil.
1 1/16	5/32	.156	.750	1.511	N.Y.

(Continued)

ALLEGHENY METAL 18-8 STAINLESS SEAMLESS TUBING

Available in Type Nos. 302-304

Cold Drawn, Annealed and Pickled—Random Lengths

Size O.D.	Average Wall Thickness B.W. Gauge or Inches	Dec. Inches	Size I.D.	Wt. Per Ft., Lbs.	In Stock At
(Continued)					
1⅛	20	.035	1.055	.4070	Phil.
	18	.049	1.027	.5631	Phil.
	16	.065	.995	.7359	Phil.
	13	.095	.935	1.045	Phil.
	11	.120	.885	1.288	N.Y.
	3/16	.188	.750	1.881	Phil.
	¼	.250	.625	2.336	Phil.
1¼	20	.035	1.180	.4542	Phil.
	18	.049	1.152	.6285	Phil.
	16	.065	1.120	.8226	Phil.
	14	.083	1.084	1.034	N.Y.
	13	.095	1.060	1.172	Phil.
	11	.120	1.010	1.448	Phil.
	3/16	.188	.875	2.132	Phil.
	¼	.250	.750	2.670	Phil.
1.315	..	.133	1.049	1.679	Phil.
1⅜	16	.065	1.245	.9094	Phil.
	11	.120	1.135	1.608	Phil.
1½	20	.035	1.430	.5476	Chgo.
	18	.049	1.402	.7593	Phil.
	16	.065	1.370	.9962	Phil
	14	.083	1.334	1.256	Chgo.
	13	.095	1.310	1.426	Phil.
	11	.120	1.260	1.769	Phil.
	3/16	.188	1.125	2.634	Phil.
	¼	.250	1.000	3.338	Phil.
1⅝	20	.035	1.555	.5943	Phil.
	16	.065	1.495	1.083	Phil.
	11	.120	1.385	1.929	Phil.
1.660	..	.140	1.380	2.273	Phil.
1¾	18	.049	1.652	.8902	N.Y.
	16	.065	1.620	1.170	Phil.
	11	.120	1.510	2.098	Phil.
	3/16	.188	1.375	3.136	Phil.
	¼	.250	1.250	4.005	Phil.
1⅞	13	.095	1.685	1.806	N.Y.
1.900	..	.145	1.610	2.718	Phil.
2	20	.035	1.930	.7345	Phil.
	18	.049	1.902	1.021	N.Y.
	16	.065	1.870	1.343	Phil.
	14	.083	1.834	1.699	Chgo.
	13	.095	1.810	1.933	Phil.
	12	.109	1.782	2.201	Phil.
	11	.120	1.760	2.409	Phil.
	3/16	.188	1.625	3.638	Phil.
	¼	.250	1.500	4.673	Phil.
2¼	16	.065	2.120	1.517	Phil.
	13	.095	2.060	2.186	Chgo.
	11	.120	2.010	2.730	Phil.
	3/16	.188	1.875	4.140	N.Y.
	¼	.250	1.750	5.340	Phil.
2.375	..	.154	2 067	3.653	Phil.
2⅜	16	.065	2.245	1.604	Phil.
	11	.120	2.385	3.210	Chgo.
2½	18	.049	2.402	1.283	Chgo.
	16	.065	2.370	1.690	Phil.

(Continued)

Tubing 189
Blr. Tube Babbit 203
...elding Rod 213
Bolt Reir 22.
Data 243
C...

ALLEGHENY METAL 18-8 STAINLESS SEAMLESS TUBING

Available in Type Nos. 302-304
Cold Drawn, Annealed and Pickled—Random Lengths

Size O.D.	Average Wall Thickness B.W. Gauge or Inches	Dec. Inches	Size I.D.	Wt. Per Ft., Lbs.	In Stock At
(Continued)					
2½	14	.083	2.334	2.143	N.Y.
	11	.120	2.260	3.050	Phil.
	3/16	188	2.125	4.642	N.Y.
	¼	.250	2.000	6.008	Phil.
2.875	..	.203	2.469	5.793	Phil.
2⅝	16	.065	2.495	1.777	Phil.
2¾	16	.065	2.620	1.864	N.Y.
	11	.120	2 510	3.371	Phil.
	¼	.250	2.250	6.675	Phil.
3	16	.065	2.870	2.037	Phil.
	14	.083	2.834	2.586	N.Y.
	13	.095	2.810	2.947	Phil.
	11	.120	2.760	3.691	Phil.
	¼	.250	2.500	7.343	Phil.
3¼	16	.065	2.870	2.037	Phil.
	11	.120	3.010	4.011	Phil.
	¼	.250	2.750	8 010	Phil.
3½	16	.065	3.370	2.385	N.Y.
	11	.120	3.260	4.332	Phil.
3.500	..	.216	3.068	7.576	Phil.
3¾	11	.120	3.510	4.652	Phil.
4	14	.083	3.834	3.474	Phil.
	13	.095	3.810	3.962	N.Y.
	11	.120	3.760	4.973	Phil.
	3/16	.188	3.625	7.654	N.Y.
4.000	..	.226	3.548	9.109	Phil.
4.500	..	.237	4.026	10.79	Phil.
5.000	11	.120	4.760	6.254	Phil.
5.563	..	.258	5.047	14.62	Phil.
6.625	..	.280	6.065	18.97	Phil.

ALLEGHENY METAL 18-8 STAINLESS PIPE FITTINGS—(I.P.S.)

LIST PRICE EACH

Size	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1¼"	1½"	2"
90° Elbows	$1.15	$1.15	$1.30	$1.50	$1.75	$2.25	$3.00	$3.75	$5.50
45° Elbows	1.40	1.40	1.60	1.85	2.25	2.65	3.50	4.50	6.50
Tees	1.60	1.60	1.80	2.10	2.50	3.25	4.25	5.25	7.75
Crosses	2.30	2.30	2.60	3.00	3.50	4.50	6.00	7.50	11.00
Caps	1.05	1.05	1.20	1.40	1.60	2.00	2.60	3.25	4.50
Couplings	1.15	1.15	1.30	1.50	1.70	2.15	2.80	3.50	5.00
Plugs	.70	.70	.80	.95	1.10	1.40	1.80	2.25	3.10
Bushings	...	.90	.95	1.05	1.20	1.50	1.95	2.45	3.40
Unions	4.00	4.00	4.00	4.00	5.25	7.00	9.75	12.75	17.00
Locknuts	.80	.80	.95	1.05	1.20	1.55	2.00	2.25	2.95
Close Nipples	.66	.78	.84	.90	.96	1.20	1.62	2.04	2.52

Discounts furnished on application. Additional sizes of valves, flanges, etc., and railing fittings can be supplied.

Also available are Reducing Elbows, Tees, Couplings, etc., at an extra of 15% added to the price listed above under the larger dimension.

ALLEGHENY METAL 18-8 STAINLESS ATOMIC HYDROGEN WELDED TUBING

Type No. 304

Cold Rolled, Annealed, Pickled Finish

Shipped from our Chicago Plant

This tubing is formed from cold rolled strip and butt welded by the atomic hydrogen process. Through this method of welding, all oxygen is excluded, thus eliminating oxides. The burr is removed from the inside and outside of the tubes and they are then given a full anneal to assure maximum corrosion resistance. All tubes are tested at 250 p.s.i. air pressure under water. Bursting pressure is practically the same as for seamless tubes of same material, size and gauge.

14' to 16' Random Lengths

Size O.D.	Average Wall Thickness B.W. Ga. or Inches	Dec. Inches	Size I.D.	Approx. Wt. Per Ft. Lbs.
3/8	20	.035	.305	.1271
	18	.049	.277	.1706
	17	.058	.259	.1964
7/16	20	.035	.367	.1506
	18	.049	.340	.2036
1/2	20	.035	.430	.1738
	18	.049	.402	.2306
	16	.065	.370	.3020
9/16	20	.035	.493	.1974
	18	.049	.465	.2690
	16	.065	.432	.3457
5/8	20	.035	.555	.2205
	18	.049	.527	.3014
	16	.065	.485	.3888
11/16	20	.035	.617	.2441
	18	.049	.589	.3344
	16	.065	.557	.4325
3/4	20	.035	.680	.2673
	18	.049	.652	.3668
	16	.065	.620	.4755
7/8	20	.035	.805	.3140
	18	.049	.777	.4323
	16	.065	.745	.5623
1	20	.035	.930	.3607
	18	.049	.902	.4977
	16	.065	.870	.6491
	14	.083	.834	.8129
1 1/16	20	.035	.992	.3843
	18	.049	.964	.5306
	16	.065	.932	.6928
1 1/8	20	.035	1.055	.4070
	18	.049	1.027	.5631
	16	.065	.995	.7359
1 3/16	20	.035	1.117	.4310
	18	.049	1.090	.5961
	16	.065	1.057	.7796
1 1/4	20	.035	1.180	.4542
	18	.049	1.152	.6285
	16	.065	1.120	.8226
	14	.083	1.084	1.034
1 5/16	20	.035	1.242	.4777
	18	.049	1.214	.6615
	16	.065	1.182	.8664
	14	.083	1.147	1.090
1 3/8	16	.065	1.245	.9094
1 1/2	20	.035	1.430	.5476
	18	.049	1.402	.7593
	16	.065	1.370	.9962
	14	.083	1.334	1.256
1 5/8	20	.035	1.555	.5943
	18	.049	1.527	.8248
	16	.065	1.495	1.083
1 3/4	18	.049	1.652	.8902
	16	.065	1.620	1.170
1 7/8	20	.035	1.805	.6878
	18	.049	1.777	.9556
	16	.065	1.745	1.257
2	20	.035	1.930	.7345
	18	.049	1.902	1.021
	16	.065	1.870	1.343
	14	.083	1.834	1.699

RYERSON CERTIFIED STEELS

Large and complete stocks of uniform high quality steel and allied products carried in stock for immediate shipment to meet every requirement. Write for literature on any product.

Tubing 189
Blr. Tube Babbit 203
...ding Rod 213
Bolt Reir 22.
Data 243
C...

ALLEGHENY METAL 18-8 M STAINLESS SEAMLESS PIPE—(I.P.S.)

Type No. 316

Shipped from our Chicago Plant

STANDARD WEIGHT

Cold Drawn, Annealed and Pickled
12′ to 19′ Random Lengths

Iron Pipe Size, Inches	Diameter, Inches		Wall Thickness Inches	Weight Per Ft. Lbs.
	O. D.	I. D.		
1/8	.405	.269	.068	.245
1/4	.540	.364	.088	.424
3/8	.675	.493	.091	.567
1/2	.840	.622	.109	.850
3/4	1.050	.824	.113	1.131
1	1.315	1.049	.133	1.679
1-1/4	1.660	1.380	.140	2.273
1-1/2	1.900	1.610	.145	2.718
2	2.375	2.067	.154	3.653
2-1/2	2.875	2.469	.203	5.793
3	3.500	3.068	.216	7.576

ALLEGHENY METAL 18-8 M SPEC. STAINLESS SEAMLESS PIPE—(I.P.S.)

Type No. 317

Shipped from our Boston Plant

STANDARD WEIGHT

Cold Drawn, Annealed and Pickled
15′ to 22′ Random Lengths

Iron Pipe Size, Inches	Diameter, Inches		Wall Thickness Inches	Weight Per Ft. Lbs.
	O. D.	I. D.		
1/4	.540	.364	.088	.424
3/8	.675	.493	.091	.567
1/2	.840	.622	.109	.850
3/4	1.050	.824	.113	1.131
1	1.315	1.049	.133	1.679
1-1/4	1.660	1.380	.140	2.273
1-1/2	1.900	1.610	.145	2.718
2	2.375	2.067	.154	3.653
2-1/2	2.875	2.469	.203	5.793
3	3.500	3.068	.216	7.576

Above weights and dimensions are approximate.

ALLEGHENY METAL 18-8 STAINLESS SEAMLESS PIPE—(I.P.S.)

Type Nos. 302-304

STANDARD WEIGHT

Cold Drawn, Annealed and Pickled
Random Lengths

Iron Pipe Size, Inches	Diameter, Inches O. D.	Diameter, Inches I. D.	Wall Thickness Inches	Wt. Per Ft., Lbs.
1/8	.405	.269	.068	.245
1/4	.540	.364	.088	.424
3/8	.675	.493	.091	.567
1/2	.840	.622	.109	.850
3/4	1.050	.824	.113	1.131
1	1.315	1.049	.133	1.679
1-1/4	1.660	1.380	.140	2.273
1-1/2	1.900	1.610	.145	2.718
2	2.375	2.067	.154	3.653
2-1/2	2.875	2.469	.203	5.793
3	3.500	3.068	.216	7.576
3-1/2	4.000	3.548	.226	9.109
4	4.500	4.026	.237	10.79
5	5.563	5.047	.258	14.62
6	6.625	6.065	.280	18.97

EXTRA STRONG

Cold Drawn, Annealed and Pickled
Random Lengths

Iron Pipe Size, Inches	Diameter, Inches O. D.	Diameter, Inches I. D.	Wall Thickness Inches	Wt. Per Ft., Lbs.
1/8	.405	.215	.095	.3145
1/4	.540	.302	.119	.5351
3/8	.675	.423	.126	.7388
1/2	.840	.546	.147	1.088
3/4	1.050	.742	.154	1.474
1	1.315	.957	.179	2.172
1-1/4	1.660	1.278	.191	2.997
1-1/2	1.900	1.500	.200	3.631
2	2.375	1.939	.218	5.022
2-1/2	2.875	2.323	.276	7.661
3	3.500	2.900	.300	10.25
3-1/2	4.000	3.364	.318	12.51
4	4.500	3.826	.337	14.98
5	5.563	4.813	.375	20.78

Above weights and dimensions are approximate.

STAINLESS STEEL STRIP, ETC.

Allegheny Metal 18-8 Stainless and Allegheny 12 is available in all the commercial forms, including strip, forgings, billets, etc. We are in a position to furnish all of these items. Write us about your requirements.

Tubing 189
Blr. Tube Babbit 203
...elding Rod 213
Bolt Reir 22.
Data 243
C...

TIMKEN MECHANICAL TUBING

Timken Seamless Mechanical Steel Tubing is a specialty product manufactured to meet the most exacting requirements—yet it costs no more than ordinary tubing.

Uniform chemical and physical characteristics and dense, close grain structure assure uniform machinability. Each heat of steel is subjected to a series of tests from furnace to finished tubing, thus insuring a uniform, high quality product whether you use a single tube or a carload.

COLD DRAWN SEAMLESS MECHANICAL STEEL TUBING

Timken Quality—S. A. E. 1015

Round Sizes—Random Lengths 5 to 22 Ft.

Size O. D.	Average Wall Thickness B. W. Ga.	Average Wall Thickness Dec. Inches	I. D.	Wt. Per Ft. Lbs.
1/16				
	24	.022	.018	.0096
3/32				
	24	.022	.049	.0169
	21	.032	.029	.0212
1/8				
	24	.022	.081	.0242
	23	.025	.075	.0267
	21	.032	.061	.0318
	18	.049	.027	.0398
5/32				
	24	.022	.112	.0315
	22	.028	.100	.0384
	21	.032	.092	.0425
	18	.049	.058	.0560
3/16				
	26	.018	.152	.0327
	24	.022	.144	.0390
	22	.028	.131	.0478
	21	.032	.123	.0533
	20	.035	.117	.0572
	19	.042	.104	.0655
	18	.049	.089	.0727
	17	.058	.072	.0805
	16	.065	.058	.0854
	14	.083	.022	.0931
7/32				
	24	.022	.174	.0463
	21	.032	.155	.0639
	18	.049	.120	.0888
	16	.065	.088	.1100
1/4				
	26	.018	.214	.0446
	24	.022	.206	.0536
	23	.025	.200	.0601
	22	.028	.194	.0664
	21	.032	.187	.0745
	20	.035	.180	.0804
	19	.042	.166	.0933
	18	.049	.152	.1052
	17	.058	.132	.1189
	16	.065	.120	.1284
	15	.072	.106	.1369
	14	.083	.084	.1480
	13	.095	.060	.1573
5/16				
	24	.022	.268	.0684
	23	.025	.263	.0769
	22	.028	.256	.0852
	21	.032	.249	.0960
	20	.035	.242	.1039
	19	.042	.229	.1216
	18	.049	.214	.1382
	17	.058	.196	.1580
	16	.065	.182	.1722
	14	.083	.147	.2039
	13	.095	.122	.2212
	12	.109	.094	.2375
	11	.120	.072	.2473
3/8				
	24	.022	.331	.0829
	23	.025	.325	.0935
	22	.028	.319	.1038
	21	.032	.311	.1172
	20	.035	.305	.1271
	19	.042	.293	.1494
	18	.049	.277	.1706
	17	.058	.259	.1964
	16	.065	.245	.2152
	15	.072	.231	.2330
	14	.083	.209	.2588
	13	.095	.185	.2841
	12	.109	.157	.3097
	11	.120	.135	.3268
	10	.134	.107	.3449
13/32				
	18	.049	.308	.1868
	16	.065	.276	.2367
	13	.095	.216	.3155
7/16				
	24	.022	.393	.0977
	23	.025	.388	.1103
	22	.028	.381	.1226
	21	.032	.374	.1388
	20	.035	.367	.1506
	19	.042	.354	.1776
	18	.049	.340	.2036
	17	.058	.322	.2354
	16	.065	.307	.2589

(Continued)

COLD DRAWN SEAMLESS MECHANICAL STEEL TUBING—(Cont'd)

Timken Quality—S. A. E. 1015

Round Sizes—Random Lengths 5 to 22 Ft.

Size O. D.	Average Wall Thickness B. W. Ga.	Dec. Inches	I. D.	Wt. Per Ft. Lbs.
(Continued)				
7/16				
	14	.083	.272	.3147
	13	.095	.247	.3480
	12	.109	.219	.3830
	11	.120	.197	.4075
	10	.134	.169	.4351
1/2				
	26	.018	.464	.0927
	24	.022	.456	.1123
	23	.025	.450	.1268
	22	.028	.444	.1411
	21	.032	.436	.1599
	20	.035	.430	.1738
	19	.042	.416	.2054
	18	.049	.402	.2360
	17	.058	.384	.2738
	16	.065	.370	.3020
	15	.072	.356	.3291
	14	.083	.334	.3696
	13	.095	.310	.4109
	12	.109	.282	.4552
	11	.120	.260	.4870
	10	.134	.232	.5238
	5/32	.156	.187	.5731
	3/16	.187	.125	.6264
17/32				
	16	.065	.401	.3237
	*14	.083	.365	.3971
	11	.120	.291	.5267
†.540				
		.088	.364	.4248
9/16				
	24	.022	.519	.1271
	22	.028	.506	.1600
	21	.032	.499	.1815
	20	.035	.492	.1974
	19	.042	.479	.2337
	18	.049	.464	.2690
	17	.058	.447	.3128
	16	.065	.432	.3457
	15	.072	.419	.3776
	14	.083	.396	.4255
	13	.095	.372	.4748
	12	.109	.344	.5285
	11	.120	.322	.5677
	10	.134	.295	.6140
	5/32	.156	.250	.6781
	3/16	.188	.188	.7529
19/32				
	15	.072	.450	.4014
5/8				
	24	.022	.581	.1417
5/8				
	23	.025	.575	.1602
	22	.028	.569	.1785
	21	.032	.561	.2027
	20	.035	.555	.2205
	19	.042	.541	.2615
	18	.049	.527	.3014
	17	.058	.509	.3512
	16	.065	.495	.3888
	15	.072	.481	.4252
	14	.083	.459	.4805
	13	.095	.435	.5377
	12	.109	.407	.6007
	11	.120	.385	.6472
	10	.134	.357	.7027
	5/32	.156	.312	.7814
	3/16	.188	.250	.8774
	7/32	.219	.187	.9496
	1/4	.250	.125	1.001
21/32				
	13	.095	.466	.5694
	1/8	.125	.406	.7089
†.675				
		.091	.495	.5676
11/16				
	24	.022	.644	.1565
	22	.028	.631	.1974
	20	.035	.617	.2441
	18	.049	.589	.3344
	17	.058	.571	.3902
	16	.065	.557	.4325
	14	.083	.521	.5363
	13	.095	.497	.6017
	12	.109	.469	.6740
	11	.120	.447	.7279
	10	.134	.419	.7928
	5/32	.156	.375	.8864
	3/16	.188	.312	1.004
	7/32	.219	.250	1.097
3/4				
	24	.022	.706	.1711
	22	.028	.694	.2159
	21	.032	.686	.2454
	20	.035	.680	.2673
	19	.042	.666	.3176
	18	.049	.652	.3668
	17	.058	.642	.4287
	16	.065	.620	.4755
	15	.072	.606	.5214
	14	.083	.584	.5913
	13	.095	.560	.6646
	12	.109	.532	.7462
	11	.120	.510	.8074

(Continued)

* This size also available Soft Annealed.
† These sizes carried Soft Annealed.
For stainless tubing, see Stainless Section.

Special Tubing 200
Tolerances 201
Stainless 182
Tubing 189
Blr. Tube Babbit 203
Welding Rod 213
Bolt Rein 22
Data 243

COLD DRAWN SEAMLESS MECHANICAL STEEL TUBING—(Cont'd)

Timken Quality—S. A. E. 1015

Round Sizes—Random Lengths 5 to 22 Ft.

Size O. D.	B.W. Ga.	Average Wall Thickness Dec. Inches	I. D.	Wt. Per Ft. Lbs.
(Continued)				
3/4				
	10	.134	.482	.8816
	5/32	.156	.437	.9897
	3/16	.188	.375	1.128
	7/32	.219	.313	1.242
	1/4	.250	.250	1.335
	9/32	.281	.187	1.407
13/16				
	24	.022	.769	.1859
	22	.028	.757	.2347
	20	.035	.742	.2908
	18	.049	.714	.3998
	16	.065	.682	.5193
	14	.083	.647	.6471
	13	.095	.622	.7285
	12	.109	.594	.8195
	11	.120	.572	.8881
	10	.134	.544	.9717
	5/32	.156	.500	1.095
	3/16	.188	.437	1.255
	7/32	.219	.375	1.389
	1/4	.250	.312	1.503
†.840				
		.109	.622	.8510
27/32				
	12	.109	.625	.8554
7/8				
	24	.022	.831	.2004
	22	.028	.819	.2533
	20	.035	.805	.3140
	18	.049	.777	.4323
	17	.058	.759	.5061
	16	.065	.745	.5623
	15	.072	.731	.6175
	14	.083	.709	.7021
	13	.095	.685	.7914
	12	.109	.657	.8917
	11	.120	.635	.9676
	10	.134	.607	1.060
	5/32	.156	.562	1.198
	3/16	.188	.500	1.379
	7/32	.219	.437	1.534
	1/4	.250	.375	1.669
	9/32	.281	.313	1.783
	5/16	.313	.250	1.879
15/16				
	22	.028	.881	.2721
	20	.035	.867	.3375
	18	.049	.839	.4652
	17	.058	.822	.5451
	16	.065	.807	.6060
	14	.083	.772	.7579
	13	.095	.748	.8553
15/16				
	12	.109	.719	.9651
	11	.120	.697	1.048
	10	.134	.669	1.151
	5/32	.156	.625	1.303
	3/16	.188	.562	1.506
	7/32	.219	.500	1.682
	1/4	.250	.438	1.837
	9/32	.281	.375	1.972
	5/16	.313	.313	2.089
1				
	24	.022	.956	.2298
	22	.028	.944	.2907
	21	.032	.936	.3308
	20	.035	.930	.3607
	19	.042	.916	.4297
	18	.049	.902	.4977
	17	.058	.884	.5835
	16	.065	.870	.6491
	15	.072	.856	.7136
	14	.083	.834	.8129
	13	.095	.810	.9182
	12	.109	.782	1.037
	11	.120	.760	1.128
	10	.134	.732	1.239
	5/32	.156	.687	1.406
	3/16	.188	.625	1.630
	7/32	.219	.562	1.827
	1/4	.250	.500	2.003
	9/32	.281	.438	2.158
	5/16	.313	.375	2.297
	11/32	.344	.312	2.410
	3/8	.375	.250	2.503
†1.050				
		.113	.824	1.130
1-1/16				
	22	.028	1.006	.3095
	20	.035	.992	.3843
	18	.049	.964	.5306
	17	.058	.946	.6225
	16	.065	.932	.6928
	14	.083	.897	.8687
	13	.095	.872	.9821
	12	.109	.844	1.111
	11	.120	.822	1.209
	10	.134	.795	1.330
	5/32	.156	.750	1.511
	3/16	.188	.687	1.757
	7/32	.219	.625	1.974
	1/4	.250	.562	2.171
	9/32	.281	.500	2.347
	5/16	.313	.437	2.507
	3/8	.375	.312	2.755

(Continued)

† These sizes carried Soft Annealed.

COLD DRAWN SEAMLESS MECHANICAL STEEL TUBING—(Cont'd.)

Timken Quality—S. A. E. 1015

Round Sizes—Random Lengths 5 to 22 Ft.

Size O. D.	Average Wall Thickness B. W. Ga.	Dec. Inches	I. D.	Wt. Per Ft. Lbs.
(Continued)				
1-1/8				
	22	.028	1.069	.3280
	20	.035	1.055	.4074
	18	.049	1.027	.5631
	17	.058	1.009	.6609
	16	.065	.995	.7359
	14	.083	.959	.9237
	13	.095	.935	1.045
	12	.109	.907	1.183
	11	.120	.885	1.288
	10	.134	.857	1.418
	5/32	.156	.812	1.614
	3/16	.188	.750	1.881
	7/32	.219	.688	2.119
	1/4	.250	.625	2.336
	9/32	.281	.563	2.533
	5/16	.313	.500	2.714
	11/32	.344	.437	2.869
	3/8	.375	.375	3.004
1-3/16				
	24	.022	1.143	.2740
	22	.028	1.131	.3469
	20	.035	1.117	.4310
	18	.049	1.090	.5961
	16	.065	1.057	.7796
	14	.083	1.022	.9795
	13	.095	.997	1.109
	12	.109	.969	1.256
	11	.120	.947	1.369
	10	.134	.919	1.508
	5/32	.156	.875	1.719
	3/16	.188	.812	2.008
	7/32	.219	.750	2.266
	1/4	.250	.687	2.504
	9/32	.281	.626	2.722
	5/16	.313	.562	2.925
1-1/4				
	24	.022	1.206	.2885
	22	.028	1.194	.3654
	21	.032	1.186	.4163
	20	.035	1.180	.4542
	18	.049	1.152	.6285
	17	.058	1.134	.7384
	16	.065	1.120	.8226
	15	.072	1.106	.9058
	14	.083	1.084	1.034
	13	.095	1.060	1.172
	12	.109	1.032	1.328
	11	.120	1.010	1.448
	10	.134	.982	1.597

Size O. D.	Average Wall Thickness B. W. Ga.	Dec. Inches	I. D.	Wt. Per Ft. Lbs.
1-1/4				
	5/32	.156	.937	1.823
	11/64	.172	.906	1.980
	3/16	.188	.875	2.132
	7/32	.219	.812	2.411
	1/4	.250	.750	2.670
	9/32	.281	.687	2.908
	5/16	.313	.625	3.132
	3/8	.375	.500	3.504
	7/16	.437	.375	3.798
1-5/16				
	24	.022	1.268	.3033
	22	.028	1.256	.3843
	21	.032	1.249	.4378
	20	.035	1.242	.4777
	18	.049	1.214	.6615
	16	.065	1.182	.8664
	14	.083	1.147	1.090
	13	.095	1.122	1.236
	12	.109	1.094	1.402
	11	.120	1.072	1.529
	10	.134	1.044	1.687
	5/32	.156	1.000	1.928
	3/16	.188	.937	2.259
	7/32	.219	.875	2.559
	1/4	.250	.812	2.838
	9/32	.281	.750	3.097
	5/16	.313	.688	3.343
	3/8	.375	.562	3.757
†1.315				
		.133	1.049	1.380
1-3/8				
	24	.022	1.331	.3179
	22	.028	1.319	.4028
	20	.035	1.305	.5009
	18	.049	1.277	.6939
	17	.058	1.259	.8158
	16	.065	1.245	.9094
	14	.083	1.209	1.145
	13	.095	1.185	1.299
	12	.109	1.157	1.474
	11	.120	1.135	1.608
	10	.134	1.107	1.776
	5/32	.156	1.062	2.031
	11/64	.172	1.031	2.210
	3/16	.188	1.000	2.383
	7/32	.219	.938	2.704
	1/4	.250	.875	3.004
	9/32	.281	.813	3.283
	5/16	.313	.750	3.550
	11/32	.343	.687	3.788
	3/8	.375	.625	4.005
	7/16	.438	.500	4.383
	1/2	.500	.375	4.673

(Continued)

†This size carried Soft Annealed.
For stainless tubing, see Stainless Section.

Bir. Tube Babbit 203
Welding Rod 213
Bolt Reir 22
Data 243

COLD DRAWN SEAMLESS MECHANICAL STEEL TUBING—(Cont'd)

Timken Quality—S. A. E. 1015

Round Sizes—Random Lengths 5 to 22 Ft.

Size O. D.	B.W. Ga.	Average Wall Thickness Dec. Inches	I. D.	Wt. Per Ft. Lbs.
(Continued)				
1-7/16				
	20	.035	1.367	.5244
	18	.049	1.339	.7269
	16	.065	1.307	.9531
	14	.083	1.271	1.201
	13	.095	1.247	1.363
	11	.120	1.198	1.689
	10	.134	1.170	1.866
	5/32	.156	1.125	2.136
	3/16	.188	1.062	2.510
	7/32	.219	1.000	2.851
	1/4	.250	.938	3.172
1-1/2				
	22	.028	1.444	.4402
	20	.035	1.430	.5476
	18	.049	1.402	.7593
	17	.058	1.384	.8932
	16	.065	1.370	.9962
	14	.083	1.334	1.256
	13	.095	1.310	1.426
	12	.109	1.282	1.619
	11	.120	1.260	1.769
	10	.134	1.232	1.955
	9	.148	1.204	2.137
	5/32	.156	1.187	2.239
	11/64	.172	1.156	2.439
	3/16	.188	1.125	2.634
	7/32	.219	1.062	2.996
	1/4	.250	1.000	3.338
	9/32	.281	.938	3.658
	5/16	.313	.875	3.968
	11/32	.344	.812	4.247
	3/8	.375	.750	4.506
	7/16	.438	.625	4.968
	1/2	.500	.500	5.340
1-9/16				
	20	.035	1.492	.570
	18	.049	1.464	.7920
	16	.065	1.432	1.040
	13	.095	1.372	1.489
	11	.120	1.323	1.849
	10	.134	1.295	2.045
	5/32	.156	1.250	2.344
	3/16	.187	1.187	2.761
	7/32	.219	1.124	3.144
	1/4	.250	1.062	3.506
	3/8	.375	.812	4.758
1-5/8				
	20	.035	1.555	.5943
	18	.049	1.527	.8248
	17	.058	1.509	.9707
	16	.065	1.495	1.083
	14	.083	1.459	1.367
	13	.095	1.435	1.552
	12	.109	1.407	1.765
	11	.120	1.385	1.929
	10	.134	1.357	2.134
	9	.148	1.329	2.335
	5/32	.156	1.312	2.447
	11/64	.172	1.281	2.669
	3/16	.188	1.250	2.885
	7/32	.219	1.187	3.289
	1/4	.250	1.125	3.671
	9/32	.281	1.063	4.033
	5/16	.313	1.000	4.386
	3/8	.375	.875	5.006
	7/16	.438	.749	5.553
	1/2	.500	.625	6.008
†1.660				
		.140	1.380	2.717
1-11/16				
	18	.049	1.590	.8577
	16	.065	1.558	1.127
	14	.083	1.522	1.420
	13	.095	1.497	1.616
	11	.120	1.447	2.010
	5/32	.156	1.376	2.552
	3/16	.187	1.312	3.012
	1/4	.250	1.188	3.839
	3/8	.375	.937	5.259
1-3/4				
	22	.028	1.694	.5149
	20	.035	1.680	.6411
	18	.049	1.652	.8902
	17	.058	1.634	1.048
	16	.065	1.620	1.170
	14	.083	1.584	1.478
	13	.095	1.560	1.679
	12	.109	1.532	1.910
	11	.120	1.510	2.098
	10	.134	1.482	2.313
	5/32	.156	1.437	2.656
	3/16	.188	1.375	3.136
	7/32	.219	1.312	3.581
	1/4	.250	1.250	4.005
	9/32	.281	1.188	4.409
	5/16	.313	1.125	4.804
	3/8	.375	1.000	5.507
	7/16	.438	.875	6.137
	1/2	.500	.750	6.675
	9/16	.563	.624	7.137
	5/8	.625	.500	7.509

(Continued)

† This size carried Soft Annealed.

COLD DRAWN SEAMLESS MECHANICAL STEEL TUBING—(Cont'd)

Timken Quality—S. A. E. 1015

Round Sizes—Random Lengths 5 to 22 Ft.

Size O. D.	Average Wall Thickness B. W. Ga.	Dec. Inches	I. D.	Wt. Per Ft. Lbs.
(Continued)				
1-13/16				
	14	.083	1.647	1.534
	13	.095	1.622	1.743
	11	.120	1.572	2.170
	5/32	.156	1.501	2.761
	3/16	.188	1.439	3.263
	7/32	.219	1.375	3.728
	1/4	.250	1.313	4.173
1-7/8				
	20	.035	1.805	.6878
	18	.049	1.777	.9556
	16	.065	1.745	1.257
	14	.083	1.709	1.589
	13	.095	1.685	1.806
	12	.109	1.657	2.056
	11	.120	1.635	2.249
	10	.134	1.607	2.492
	9	.148	1.579	2.730
	5/32	.156	1.563	2.864
	3/16	.188	1.500	3.387
	7/32	.219	1.438	3.873
	1/4	.250	1.375	4.339
	9/32	.281	1.313	4.790
	5/16	.313	1.250	5.222
	3/8	.375	1.125	6.008
	7/16	.437	1.000	6.722
	1/2	.500	.875	7.343
	9/16	.563	.750	7.889
	5/8	.625	.625	8.344
1-15/16				
	11	.120	1.698	2.330
	5/32	.156	1.625	2.969
	7/32	.219	1.499	4.021
	1/4	.250	1.437	4.507
2				
	22	.028	1.944	.5897
	20	.035	1.930	.7345
	18	.049	1.902	1.021
	16	.065	1.870	1.343
	14	.083	1.834	1.699
	13	.095	1.810	1.933
	12	.109	1.782	2.201
	11	.120	1.760	2.409
	10	.134	1.732	2.670
	5/32	.156	1.687	3.072
	3/16	.188	1.625	3.638
	7/32	.219	1.562	4.166
	1/4	.250	1.500	4.673
	9/32	.281	1.437	5.159
	5/16	.313	1.375	5.639
	11/32	.344	1.313	6.084
	3/8	.375	1.250	6.508
	7/16	.438	1.125	7.307
	1/2	.500	1.000	8.010

Size O. D.	Average Wall Thickness B. W. Ga.	Dec. Inches	I. D.	Wt. Per Ft. Lbs.
2				
	9/16	.563	.874	8.640
	5/8	.625	.750	9.178
	3/4	.750	.500	10.01
2-1/16				
	11	.120	1.822	2.490
	3/16	.188	1.689	3.746
	1/4	.250	1.562	4.841
2-1/8				
	20	.035	2.055	.7812
	18	.049	2.027	1.086
	16	.065	1.995	1.430
	14	.083	1.959	1.810
	13	.095	1.935	2.060
	11	.120	1.885	2.570
	5/32	.156	1.813	3.281
	3/16	.188	1.750	3.889
	7/32	.219	1.687	4.458
	1/4	.250	1.625	5.006
	9/32	.281	1.563	5.534
	5/16	.313	1.500	6.057
	3/8	.375	1.375	7.009
	7/16	.438	1.250	7.892
	1/2	.500	1.125	8.678
	9/16	.562	1.000	9.392
	5/8	.625	.875	10.01
2-1/4				
	20	.035	2.180	.8280
	18	.049	2.152	1.152
	16	.065	2.120	1.517
	14	.083	2.084	1.921
	13	.095	2.060	2.186
	12	.109	2.032	2.492
	11	.120	2.010	2.730
	10	.134	1.982	3.028
	5/32	.156	1.937	3.489
	3/16	.188	1.875	4.140
	7/32	.219	1.813	4.750
	1/4	.250	1.750	5.340
	9/32	.281	1.688	5.909
	5/16	.313	1.625	6.475
	11/32	.344	1.562	7.002
	3/8	.375	1.500	7.509
	13/32	.406	1.438	7.996
	7/16	.438	1.375	8.476
	1/2	.500	1.250	9.345
	9/16	.563	1.124	10.14
	5/8	.625	1.000	10.85
	3/4	.750	.750	12.02
2-5/16				
	16	.065	2.182	1.561
	9/16	.187	1.939	4.267
	1/4	.250	1.813	5.508

(Continued)

For stainless tubing, see Stainless Section.

Bir. Tube Babbit 203
Welding Rod 213
Bolts Rein 221
Data 243

COLD DRAWN SEAMLESS MECHANICAL STEEL TUBING—(Cont'd)

Timken Quality—S. A. E. 1015

Round Sizes—Random Lengths 5 to 22 Ft.

Size O. D.	Average Wall Thickness B. W. Ga.	Dec. Inches	I. D.	Wt. Per Ft. Lbs.
(Continued)				
2-3/8				
	20	.035	2.305	.8747
	18	.049	2.277	1.217
	16	.065	2.245	1.604
	14	.083	2.209	2.032
	13	.095	2.185	2.313
	11	.120	2.135	2.890
	10	.134	2.107	3.207
	5/32	.156	2.062	3.697
	3/16	.188	2.000	4.391
	7/32	.219	1.937	5.043
	1/4	.250	1.875	5.674
	9/32	.281	1.813	6.284
	5/16	.313	1.750	6.893
	11/32	.344	1.687	7.462
	3/8	.375	1.625	8.010
	7/16	.438	1.500	9.061
	1/2	.500	1.375	10.01
	9/16	.563	1.249	10.90
	5/8	.625	1.125	11.68
2-7/16				
	3/16	.188	2.063	4.518
	7/32	.219	2.000	5.190
	5/16	.313	1.811	7.104
2-1/2				
	20	.035	2.430	.9214
	18	.049	2.402	1.283
	16	.065	2.370	1.690
	14	.083	2.334	2.143
	13	.095	2.310	2.440
	12	.109	2.282	2.783
	11	.120	2.260	3.050
	10	.134	2.232	3.386
	5/32	.156	2.187	3.905
	3/16	.188	2.125	4.642
	7/32	.219	2.062	5.335
	1/4	.250	2.000	6.008
	9/32	.281	1.937	6.659
	5/16	.313	1.875	7.311
	11/32	.344	1.812	7.921
	3/8	.375	1.750	8.511
	7/16	.438	1.625	9.646
	1/2	.500	1.500	10.68
	9/16	.563	1.375	11.65
	5/8	.625	1.250	12.52
	11/16	.688	1.124	13.31
	3/4	.750	1.000	14.02
	1	1.000	.500	16.02
2-9/16				
	1/4	.250	2.062	6.176
2-5/8				
	16	.065	2.495	1.777
	14	.083	2.459	2.253
	13	.095	2.435	2.567

Size O. D.	Average Wall Thickness B. W. Ga.	Dec. Inches	I. D.	Wt. Per Ft. Lbs.
2-5/8				
	12	.109	2.407	2.929
	11	.120	2.385	3.210
	5/32	.156	2.312	4.114
	3/16	.188	2.250	4.893
	7/32	.219	2.187	5.627
	1/4	.250	2.125	6.341
	9/32	.281	2.063	7.035
	5/16	.313	2.000	7.729
	3/8	.375	1.875	9.011
	7/16	.438	1.751	10.23
	1/2	.500	1.625	11.35
	9/16	.562	1.501	12.40
	5/8	.625	1.375	13.35
2-11/16				
	11	.120	2.447	3.291
	3/16	.187	2.314	5.020
	5/16	.313	2.061	7.939
2-3/4				
	20	.035	2.680	1.015
	18	.049	2.652	1.413
	16	.065	2.620	1.864
	14	.083	2.584	2.364
	13	.095	2.560	2.694
	12	.109	2.532	3.074
	11	.120	2.510	3.371
	10	.134	2.482	3.744
	5/32	.156	2.437	4.322
	11/64	.172	2.406	4.736
	3/16	.188	2.375	5.144
	7/32	.219	2.312	5.920
	1/4	.250	2.250	6.675
	9/32	.281	2.187	7.410
	5/16	.313	2.125	8.147
	11/32	.344	2.062	8.839
	3/8	.375	2.000	9.512
	13/32	.406	1.938	10.17
	7/16	.437	1.875	10.82
	1/2	.500	1.750	12.02
	9/16	.562	1.625	13.15
	5/8	.625	1.500	14.18
	11/16	.688	1.374	15.15
	3/4	.750	1.250	16.02
	7/8	.875	1.000	17.52
	1	1.000	.750	18.69
2-13/16				
	1/4	.250	2.312	6.843
2-7/8				
	16	.065	2.749	1.951
	13	.095	2.685	2.821
	11	.120	2.635	3.531
	5/32	.156	2.563	4.530
	3/16	.188	2.500	5.395
	13/64	.203	2.469	5.793

(Continued)

For stainless tubing, see Stainless Section.

COLD DRAWN SEAMLESS MECHANICAL STEEL TUBING—(Cont'd)

Timken Quality—S. A. E. 1015

Round Sizes—Random Lengths 5 to 22 Ft.

Size O. D.	B. W. Ga.	Average Wall Thickness Dec. Inches	I. D.	Wt. Per Ft. Lbs.
(Continued)				
2-7/8				
	7/32	.219	2.437	6.212
	1/4	.250	2.375	7.009
	9/32	.281	2.312	7.785
	5/16	.313	2.250	8.564
	3/8	.375	2.125	10.01
	7/16	.438	2.000	11.40
	1/2	.500	1.875	12.68
	9/16	.562	1.751	13.90
	5/8	.625	1.625	15.02
	13/16	.813	1.249	17.90
	3/4	.750	1.375	17.02
2-15/16				
	3/16	.187	2.562	5.490
3				
	18	.049	2.902	1.544
	16	.065	2.870	2.037
	14	.083	2.834	2.586
	13	.095	2.810	2.947
	12	.109	2.782	3.365
	11	.120	2.760	3.691
	10	.134	2.732	4.102
	5/32	.156	2.687	4.738
	3/16	.188	2.625	5.646
	13/64	.203	2.594	5.890
	7/32	.219	2.562	6.505
	15/64	.234	2.532	Chgo.
	1/4	.250	2.500	7.343
	9/32	.281	2.437	8.160
	5/16	.313	2.375	8.982
	11/32	.344	2.312	9.758
	3/8	.375	2.250	10.51
	7/16	.437	2.125	11.98
	1/2	.500	2.000	13.35
	9/16	.563	1.875	14.65
	5/8	.625	1.750	15.85
	11/16	.687	1.625	16.99
	3/4	.750	1.500	18.02
	7/8	.875	1.250	19.86
	1	1.000	1.000	21.36
3-1/16				
	5/16	.312	2.438	9.193
	3/8	.375	2.312	10.77
3-1/8				
	16	.065	2.995	2.124
	13	.095	2.935	3.074
	11	.120	2.885	3.851
	3/16	.188	2.750	5.897
	7/32	.218	2.687	6.797
	1/4	.250	2.625	7.676
	5/16	.313	2.499	9.400
	3/8	.375	2.375	11.01
	7/16	.438	2.250	12.57

Size O. D.	B. W. Ga.	Average Wall Thickness Dec. Inches	I. D.	Wt. Per Ft. Lbs.
3-1/8				
	1/2	.500	2.125	14.02
	9/16	.563	2.000	15.40
	5/8	.625	1.875	16.69
	11/16	.687	1.750	17.91
	3/4	.750	1.625	19.02
	7/8	.875	1.375	21.03
3-1/4				
	16	.065	3.120	2.211
	14	.083	3.084	2.807
	13	.095	3.060	2.201
	11	.120	3.010	4.011
	5/32	.156	2.938	5.155
	3/16	.188	2.875	6.148
	7/32	.219	2.813	7.089
	1/4	.250	2.750	8.010
	9/32	.281	2.688	8.910
	5/16	.313	2.625	9.818
	11/32	.344	2.562	10.68
	3/8	.375	2.500	11.51
	13/32	.406	2.438	12.33
	7/16	.438	2.375	13.15
	1/2	.500	2.250	14.69
	9/16	.563	2.125	16.16
	5/8	.625	2.000	17.52
	3/4	.750	1.750	20.03
	7/8	.875	1.500	22.19
	1	1.000	1.250	24.03
3-5/16				
	3/8	.375	2.563	11.77
3-3/8				
	16	.065	3.245	2.298
	11	.120	3.135	4.172
	3/16	.188	3.000	6.399
	13/64	.203	2.968	6.880
	7/32	.219	2.937	7.382
	1/4	.250	2.875	8.344
	9/32	.281	2.813	9.285
	5/16	.313	2.749	10.24
	3/8	.375	2.625	12.02
	7/16	.438	2.501	13.74
	1/2	.500	2.375	15.35
	9/16	.563	2.249	16.91
	5/8	.625	2.125	18.36
	3/4	.750	1.875	21.03
3-7/16				
	3/8	.375	2.688	12.27
3-1/2				
	20	.035	3.430	1.295
	18	.049	3.402	1.806
	16	.065	3.370	2.385
	14	.083	3.334	3.029

(Continued)

Blr. Tube Babbit 203
Welding Rod 213
Bolts Rein 22
Data 243
C

COLD DRAWN SEAMLESS MECHANICAL STEEL TUBING—(Cont'd)

Timken Quality—S. A. E. 1015

Round Sizes—Random Lengths 5 to 22 Ft.

Size O. D.	Average Wall Thickness B. W. Ga.	Dec. Inches	I. D.	Wt. Per Ft. Lbs.
(Continued)				
3-1/2				
	13	.095	3.310	3.455
	11	.120	3.260	4.332
	10	.134	3.232	4.817
	5/32	.156	3.188	5.571
	3/16	.188	3.125	6.650
	7/32	.219	3.063	7.674
	1/4	.250	3.000	8.678
	9/32	.281	2.938	9.660
	5/16	.313	2.875	10.65
	11/32	.344	2.812	11.59
	3/8	.375	2.750	12.52
	7/16	.438	2.625	14.32
	15/32	.469	2.562	15.18
	1/2	.500	2.500	16.02
	9/16	.563	2.374	17.66
	5/8	.625	2.250	19.19
	3/4	.750	2.000	22.03
	7/8	.875	1.750	24.53
	1	1.000	1.500	26.70
3-9/16				
	1/4	.250	3.062	8.830
3-5/8				
	16	.065	3.495	2.471
	11	.120	3.385	4.492
	3/16	.188	3.250	6.901
	1/4	.250	3.125	9.011
	5/16	.313	3.000	11.07
	11/32	.344	2.937	12.05
	3/8	.375	2.875	13.02
	7/16	.438	2.750	14.91
	1/2	.500	2.625	16.69
	9/16	.563	2.501	18.41
	5/8	.625	2.375	20.03
3-11/16				
	7/16	.438	2.812	15.20
3-3/4				
	16	.065	3.620	2.558
	13	.095	3.560	3.708
	11	.120	3.510	4.652
	5/32	.156	3.437	5.988
	3/16	.188	3.375	7.152
	7/32	.219	3.312	8.259
	1/4	.250	3.250	9.345
	9/32	.281	3.188	10.41
	5/16	.313	3.125	11.49
	11/32	.344	3.063	12.51
	3/8	.375	3.000	13.52
	7/16	.437	2.875	15.49
	1/2	.500	2.750	17.36
	9/16	.563	2.624	19.16
	5/8	.625	2.500	20.86
3-3/4				
	11/16	.688	2.374	22.50
	3/4	.750	2.250	24.03
	7/8	.875	2.000	26.87
	1	1.000	1.750	29.37
3-7/8				
	11	.120	3.635	4.812
	10	.134	3.607	5.354
	3/16	.188	3.500	7.403
	1/4	.250	3.375	9.679
	5/16	.313	3.249	11.91
	3/8	.375	3.125	14.02
	7/16	.438	3.000	16.08
	1/2	.500	2.875	18.02
	9/16	.563	2.750	19.91
	5/8	.625	2.625	21.69
4				
	16	.065	3.870	2.732
	14	.083	3.834	3.472
	13	.095	3.810	3.962
	11	.120	3.760	4.973
	10	.134	3.732	5.533
	5/32	.156	3.687	6.404
	3/16	.188	3.625	7.654
	7/32	.219	3.562	8.843
	1/4	.250	3.500	10.01
	9/32	.281	3.438	11.16
	5/16	.313	3.375	12.33
	3/8	.375	3.250	14.52
	7/16	.437	3.126	16.66
	15/32	.469	3.062	17.68
	1/2	.500	3.000	18.69
	9/16	.563	2.875	20.67
	5/8	.625	2.750	22.53
	11/16	.688	2.624	24.34
	3/4	.750	2.500	26.03
	7/8	.875	2.250	29.20
	1	1.000	2.000	32.04
4-1/8				
	16	.065	3.995	2.818
	11	.120	3.885	5.133
	3/16	.188	3.749	7.905
	1/4	.250	3.625	10.35
	5/16	.313	3.500	12.74
	3/8	.375	3.375	15.02
	7/16	.438	3.249	17.25
	1/2	.500	3.125	19.36
	9/16	.563	3.001	21.42
	5/8	.625	2.875	23.36
4-1/4				
	16	.065	4.120	2.905
	13	.095	4.060	4.216

(Continued)

For stainless tubing, see Stainless Section.

COLD DRAWN SEAMLESS MECHANICAL STEEL TUBING—(Cont'd)

Timken Quality—S. A. E. 1015

Round Sizes—Random Lengths 5 to 22 Ft.

Size O. D.	Average Wall Thickness B. W. Ga.	Dec. Inches	I. D.	Wt. Per Ft. Lbs.
(Continued)				
4-1/4				
	11	.120	4.010	5.293
	5/32	.156	3.937	6.821
	3/16	.188	3.875	8.156
	1/4	.250	3.750	10.68
	9/32	.281	3.688	11.91
	5/16	.313	3.625	13.16
	11/32	.344	3.563	14.35
	3/8	.375	3.500	15.52
	7/16	.437	3.375	17.83
	15/32	.469	3.312	18.94
	1/2	.500	3.250	20.03
	9/16	.563	3.125	22.17
	5/8	.625	3.000	24.20
	11/16	.688	2.875	26.17
	3/4	.750	2.750	28.04
	7/8	.875	2.500	31.54
	1	1.000	2.250	34.71
	1 1/8	1.125	2.000	37.50
4-3/8				
	11	.120	4.135	5.453
	3/16	.188	4.001	8.407
	1/4	.250	3.875	11.01
	5/16	.313	3.749	13.58
	3/8	.375	3.625	16.02
	7/16	.438	3.500	18.42
	1/2	.500	3.375	20.69
	5/8	.625	3.125	25.03
4-1/2				
	16	.065	4.370	3.079
	13	.095	4.310	4.469
	11	.120	4.260	5.613
	10	.134	4.232	6.248
	5/32	.156	4.188	7.237
	3/16	.188	4.125	8.658
	7/32	.219	4.062	10.01
	1/4	.250	4.000	11.35
	5/16	.313	3.875	14.00
	3/8	.375	3.750	16.52
	7/16	.438	3.625	19.00
	1/2	.500	3.500	21.36
	9/16	.562	3.375	23.67
	5/8	.625	3.250	25.87
	11/16	.687	3.125	28.01
	3/4	.750	3.000	30.04
	7/8	.875	2.750	33.88
	1	1.000	2.500	37.38
4-5/8				
	11	.120	4.385	5.774
	3/16	.187	4.251	8.909
	1/4	.250	4.125	11.68
	5/16	.313	4.000	14.41
	3/8	.375	3.875	17.02
	7/16	.437	3.751	19.59
	1/2	.500	3.625	22.03
	5/8	.625	3.375	26.70
4-3/4				
	13	.095	4.560	4.723
	11	.120	4.510	5.934
	3/16	.188	4.375	9.160
	1/4	.250	4.250	12.02
	5/16	.313	4.125	14.83
	3/8	.375	4.000	17.52
	7/16	.438	3.874	20.17
	1/2	.500	3.750	22.70
	9/16	.563	3.624	25.18
	5/8	.625	3.500	27.53
	3/4	.750	3.250	32.04
	13/16	.813	3.124	34.18
	7/8	.875	3.000	36.21
	1	1.000	2.750	40.05
4-7/8				
	7/16	.438	3.999	20.76
	1/2	.500	3.875	23.36
	7/8	.875	3.125	37.38
5				
	16	.065	4.870	Chgo.
	13	.095	4.810	4.980
	11	.120	4.760	6.254
	10	.134	4.732	6.964
	5/32	.156	4.687	8.070
	3/16	.188	4.625	9.662
	7/32	.219	4.562	11.18
	1/4	.250	4.500	12.68
	5/16	.313	4.375	15.67
	3/8	.375	4.250	18.52
	7/16	.438	4.125	21.34
	1/2	.500	4.000	24.03
	9/16	.562	3.876	Chgo.
	5/8	.625	3.750	29.20
	3/4	.750	3.500	34.04
	7/8	.875	3.250	38.55
	1	1.000	3.000	42.72
5-1/8				
	5/16	.313	4.501	16.09
	1/2	.500	4.125	Chgo.
	5/8	.625	3.875	Chgo.
5-1/4				
	11	.120	5.010	6.575
	3/16	.187	4.875	10.16
	1/4	.250	4.750	13.35
	5/16	.313	4.625	16.50
	3/8	.375	4.500	19.52

(Continued)

Blr. Tube Babbit 203
...elding Rod 213
Bolt Rein 22
Data 243
C...

COLD DRAWN SEAMLESS MECHANICAL STEEL TUBING—(Cont'd)

Timken Quality—S. A. E. 1015

Round Sizes—Random Lengths 5 to 22 Ft.

Size O. D.	Average Wall Thickness B. W. Ga.	Dec. Inches	I. D.	Wt. Per Ft. Lbs.
(Continued)				
5-1/4				
	1/2	.500	4.250	25.37
	9/16	.563	4.121	28.16
	5/8	.625	4.000	30.87
	3/4	.750	3.750	36.05
	7/8	.875	3.500	Chgo.
	1	1.000	3.250	45.39
5-3/8				
	5/8	.625	4.125	31.71
5-1/2				
	11	.120	5.260	6.895
	10	.134	5.232	7.679
	5/32	.156	5.188	8.904
	3/16	.187	5.125	10.67
	1/4	.250	5.000	14.02
	5/16	.313	4.875	17.34
	3/8	.375	4.750	20.53
	7/16	.438	4.624	23.68
	1/2	.500	4.500	26.70
	5/8	.625	4.250	32.54
	3/4	.750	4.000	38.05
	13/16	.813	3.874	40.70
	7/8	.875	3.750	43.22
	1	1.000	3.500	48.06
5-5/8				
	5/16	.313	5.001	17.76
	1/2	.500	4.625	27.37
	5/8	.625	4.375	33.38
5-3/4				
	11	.120	5.510	7.215
	5/32	.156	5.437	9.320
	3/16	.188	5.375	11.17
	1/4	.250	5.250	14.69
	3/8	.375	5.000	21.53
	1/2	.500	4.750	28.04
	5/8	.625	4.500	34.21
	3/4	.750	4.250	40.05
	7/8	.875	4.000	45.56
	1	1.000	3.750	50.73
6				
	11	.120	5.760	7.536
	10	.134	5.732	8.395
	3/16	.188	5.625	11.67
	1/4	.250	5.500	15.35
	3/8	.375	5.250	22.53
	7/16	.437	5.126	26.02
	1/2	.500	5.000	29.37
	9/16	.562	4.876	Chgo.
	5/8	.625	4.750	35.88
	3/4	.750	4.500	42.05
	7/8	.875	4.250	47.89
	1	1.000	4.000	53.40
6				
	1 1/2	1.500	3.000	72.09
6-1/4				
	1/4	.250	5.750	16.02
	3/8	.375	5.500	23.53
	1/2	.500	5.250	30.71
	5/8	.625	5.000	37.55
	3/4	.750	4.750	44.06
	1	1.000	4.250	56.07
6-1/2				
	11	.120	6.260	8.177
	3/16	.187	6.126	12.67
	†1/4	.250	6.000	16.69
	3/8	.375	5.750	24.53
	1/2	.500	5.500	32.04
	5/8	.625	5.250	39.22
	3/4	.750	5.000	46.06
	1	1.000	4.500	58.74
7				
	3/16	.187	6.625	13.68
	1/4	.250	6.500	18.02
	3/8	.375	6.250	26.53
	7/16	.438	6.125	30.70
	1/2	.500	6.000	34.71
	5/8	.625	5.750	42.55
	3/4	.750	5.500	50.06
	1	1.000	5.000	64.08
7-1/4				
	3/8	.375	6.500	27.53
	1/2	.500	6.250	36.05
	3/4	.750	5.750	Chgo.
7-1/2				
	1/4	.250	7.000	19.36
	3/8	.375	6.750	28.54
	1/2	.500	6.500	37.38
	3/4	.750	6.000	54.07
	1	1.000	5.500	69.42
7-3/4				
	1	1.000	5.750	72.09
8				
	1/4	.250	7.500	20.69
	3/8	.375	7.250	30.54
	1/2	.500	7.000	40.05
	3/4	.750	6.500	58.07
	1	1.000	6.000	74.76
8-1/2				
	1/4	.250	8.000	22.03
	5/16	.313	7.875	27.37
	3/8	.375	7.750	32.54
	1/2	.500	7.500	42.72
	3/4	.750	7.000	62.08
	1	1.000	6.500	80.10

(Continued)

† This size also carried in Pump Cylinder Finish in Chicago Plant.

COLD DRAWN SEAMLESS MECHANICAL STEEL TUBING—(Cont'd)

Timken Quality—S. A. E. 1015

Round Sizes—Random Lengths 5 to 22 Ft.

Size O. D.	Average Wall Thickness Fract.	Dec. Inches	I.D.	Wt. Per Ft. Lbs.
(Continued)				
8-3/4				
	1/2	.500	7.750	44.06
9				
	1/4	.250	8.500	23.36
	1/2	.500	8.000	45.39
10				
	1/4	.250	9.500	26.03
	1/2	.500	9.000	50.73
10-1/2				
	1/4	.250	10.000	27.37
10-3/4				
	7/8	.875	9.000	92.28
12				
	*1/4	.250	11.500	31.37
	*5/16	.312	11.375	39.01
14				
	*5/16	.312	13.375	45.68
	*1/2	.500	13.000	72.09
16				
	*5/16	.3125	15.375	52.36
	*1/2	.500	15.000	82.77
	*3/4	.750	14.500	122.15
18				
	*5/16	.3125	17.375	59.03
	*1/2	.500	17.000	93.45
20				
	*1/2	.500	19.000	104.13

*These sizes are hot finished.

Timken Quality—S. A. E. 1045

Round Sizes—Random Lengths 5 to 22 Ft.

The following sizes of **S.A.E. 1045** grade are shipped from our Cleveland Plant.

Size O.D.	Average Wall Thickness Fract. Inches	Dec. Inches	Size I. D.	Wt. Per Ft. Lbs.
2 9/16	1/4	.250	2 1/16	6.176
2 11/16	5/16	.313	2 1/16	7.939
2 13/16	1/4	.250	2 5/16	6.843
2 13/16	5/16	.313	2 1/16	8.775
3 1/16	1/4	.250	2 9/16	7.511
3 3/16	5/16	.313	2 9/16	9.611
3 7/16	5/16	.313	2 13/16	10.450
3 1/2	1/4	.250	3	8.678
3 1/16	1/4	.250	3 1/16	8.846
3.535	..	.308	2.919	10.610
3 11/16	5/16	.313	3 1/16	11.280
4 9/16	5/16	.313	3 9/16	12.931
4.685		.398	3.889	18.220

RYERSON CERTIFIED STEELS

In 1842, when Industry's problem was availability of steel, Ryerson built up large and complete stocks. Later, when speed became important, Ryerson developed new, faster methods of cutting, handling and shipping. Now, Ryerson continues to lead in meeting Industry's requirements with higher, uniform quality.

Blr. Tube Babbit 203
Welding Rod 213
Bolts Rein 221
Data 243
C...

COLD DRAWN SEAMLESS STEEL TUBING

PIPE SIZES—SOFT ANNEALED

This tubing is cold drawn and soft annealed with surface fairly free from scale. Suitable for use in condensers, evaporators, refrigerating and air conditioning apparatus. May be used for mechanical purposes where cold bending, expanding, swedging, etc., is necessary. Random lengths 14 to 20 ft.

STANDARD PIPE SIZES

Nominal Pipe Size	Actual Pipe Size Decimal Inches O. D.	Wall	I. D.	Wt. Per Ft. Lbs.
1/4	.540	.088	.364	.424
3/8	.675	.091	.493	.567
1/2	.840	.109	.622	.850
3/4	1.050	.113	.824	1.130
1	1.315	.133	1.049	1.679
1-1/4	1.660	.140	1.380	2.273
2	2.375	.154	2.067	3.653

EXTRA HEAVY PIPE SIZES

Nominal Pipe Size	Actual Pipe Size Decimal Inches O. D.	Wall	I. D.	Wt. Per Ft. Lbs.
1/4	.540	.119	.302	.535
3/8	.675	.127	.423	.738
1/2	.840	.149	.546	1.087
1	1.315	.182	.957	2.171
1-1/4	1.660	.194	1.278	2.996
1-1/2	1.900	.203	1.500	3.631
2	2.375	.218	1.939	5.022

SQUARE COLD DRAWN SEAMLESS TUBING

Size O. D.	Average Wall Thickness B. W. Ga.	Dec. Inches	Size I. D.	Wt. Per Ft. Lbs.
5/16	20	.035	.243	.1323
3/8	20	.035	.305	.1618
	16	.065	.245	.2740
1/2	20	.035	.430	.2213
	18	.049	.402	.3005
	16	.065	.370	.3845
5/8	20	.035	.555	.2808
	18	.049	.527	.3838
	16	.065	.495	.4950
3/4	20	.035	.680	.3403
	18	.049	.652	.4671
	16	.065	.620	.6055
	13	.095	.560	.8462
	11	.120	.510	1.028
7/8	20	.035	.805	.3998
	18	.049	.777	.5504
	16	.065	.745	.7160
	14	.083	.709	.8939
	13	.095	.685	1.008
	11	.120	.635	1.232
1	20	.035	.930	.4593
	18	.049	.902	.6337
	16	.065	.870	.8264
	14	.083	.834	1.035
	11	.120	.760	1.436
1 1/8	18	.049	1.027	.717
	16	.065	.995	.9369
	11	.120	.885	1.640
1 3/16	20	.035	1.117	.5488
1 1/4	20	.035	1.180	.5783
	18	.049	1.152	.8003
	16	.065	1.120	1.047
	14	.083	1.084	1.317
	11	.120	1.010	1.844
	10	.134	.982	Phil.
1 3/8	16	.065	1.245	.9094
1 1/2	16	.065	1.370	1.268
	14	.083	1.334	1.599
	11	.120	1.260	2.252
	3/16"	.187	1.125	3.354
1 3/4	16	.065	1.620	1.489
	11	.120	1.510	2.660
1 7/8	16	.065	1.745	1.600
2	16	.065	1.870	1.710
	13	.095	1.810	2.461
	11	.120	1.760	3.068
	3/16"	.187	1.625	4.632
2 1/2	11	.120	2.260	3.884
	3/16"	.187	2.125	5.911
	1/4"	.250	2.000	7.649
3	3/16"	.187	2.625	9.710

ROUND SIZES—COLD DRAWN SEAMLESS STEEL TUBING STANDARD TOLERANCES

No. Group	Size Range	O. D. Tolerances	I. D. Tolerances	Wall Tolerances
1	3/16" OD to but not including 1/2" OD	Plus .004" Minus .000"	See Notes 1 and 2	See Notes 1, 2
2	1/2" OD to but not including 1 1/2" OD	Plus .005" Minus .000" See Note 3	Plus .000" Minus .005" See Notes 1 and 2	Plus-minus 10% See Notes 1, 2
3	1 1/2" OD to but not including 3 1/2" OD	Plus .010" Minus .000" See Note 3	Plus .000" Minus .010" See Note 1	Plus-minus 10% See Note 1
4	3 1/2" OD to but not including 5 1/2" OD	Plus .015" Minus .000" See Note 3	Plus .005" Minus .015" See Note 1	Plus-minus 10% See Note 1
5	5 1/2" OD to but not including 8" OD when wall is less than 5% of OD	Plus-minus .030" See Note 3	Plus .035" Minus .035" See Note 3	Plus-minus 10%
6	5 1/2" OD to but not including 8" OD when wall is at least 5% and not over 7 1/2% of OD	Plus-minus .020"	Plus .025" Minus .025"	Plus-minus 10%
7	5 1/2" OD to but not including 8" OD when wall is over 7 1/2% of OD	Plus .030" Minus .000"	Plus .015" Minus .030" See Note 1	Plus-minus 10% See Note 1
8	8" OD to 10 3/4" OD when wall is less than 5% of OD	Plus-minus .045" See Note 3	Plus .050" Minus .050" See Note 3	Plus-minus 10%
9	8" OD to 10 3/4" OD when wall is at least 5% and not over 7 1/2% of OD	Plus-minus .035"	Plus .040" Minus .040"	Plus-minus 10%
10	8" OD to 10 3/4" OD when wall is over 7 1/2% of OD	Plus .045" Minus .000"	Plus .015" Minus .040" See Note 1	Plus-minus 10% See Note 1

Note 1. For tubes with I.D. less than 50 per cent of O.D.
or with wall more than 25% of O.D.
or with wall more than 1 1/4 inch thick.
or weighing more than 90 pounds per foot

which cannot be successfully drawn over a mandrel, the I.D. may vary over or under by an amount equal to 10 per cent of the wall thickness. The wall thickness may vary 12 1/2 per cent over or under the thickness specified.

Note 2. For tubes with I.D. less than 1/2 inch (or less than 5/8 inch where the wall thickness is more than 20 per cent of the O. D.), which cannot be successfully drawn over a mandrel, the wall thickness may vary 15 per cent over or under that specified and the I. D. will be governed by the O. D. and wall thickness variations.

Note 3. Tubing having a wall thickness less than 3 per cent of the O. D. cannot be straightened properly without a certain amount of distortion. Consequently such tubes, while having an average O. D. and I. D. within the tolerances shown in the table, will require an ovality tolerance over and under 1/2 per cent of the nominal O. D. and I. D., this being in addition to the tolerances indicated in the table.

(Continued)

Bir. Tube Babbitt 203
Welding Rod 213
Bolts Rein 221
Data 243

ROUND SIZES—COLD DRAWN SEAMLESS STEEL TUBING STANDARD TOLERANCES (Continued)

Explanatory Notes

A. The O. D., I. D., and wall tolerances apply only to normal sizes and to unannealed and finished annealed tubing.

B. Tubing having relatively heavy or light wall in relation to the O. D. is covered by special tolerances, reference to which is made in footnotes 1 to 3 of this table.

C. Finished and unannealed tubing constitute the bulk of cold drawn mechanical tubing. Tubes which have been given a softer anneal are apt to possess more or less ovality or out-of-roundness, due to warpage in annealing, or to the subsequent straightening operations. The greater degree of heat used in making the softer anneals, with the attendant increase in scale also affects the accuracy of diameter. Therefore, medium or soft annealed tubes will not be as close to size as the table indicates.

D. Tolerances are applicable only to two dimensions (length expected). Thus, if O. D. and wall are specified, the theoretical I. D. may not conform to published tolerances. If O. D. and I. D. are specified, the wall may not conform to published tolerances except that the mean or average wall (taking into account the permissible O. D. and I. D. tolerances) will not vary more than indicated under "Wall tolerances".

Note: All tubing carried in our warehouse stocks ordered to O. D. and wall dimensions.

STRAIGHTNESS TOLERANCES

For sizes 5" O. D. and smaller, with walls 4% of the O. D. and heavier, in lengths 2 to 20 feet inclusive, in no part of any tube shall the departure from straightness exceed 1 in 1200 (.010" per lineal foot) when measured by rolling the tube on a surface plate and reading the amount of curvature from a flat surface by the insertion of a feeler gage. This is to be interpreted as a "total run-out" of 1 in 600 (.020" per lineal foot) when rotated on rollers and dial indicated.

For sizes larger than 5" O. D., all lengths under 2 feet, and all sizes in which the wall thickness is less than 4% of the O. D., the allowable departure from straightness shall not exceed 1 in 800, (.015" per lineal foot deviation from plane table or .030" per lineal foot total dial indicator reading.)

Above tolerances apply to unannealed or finished annealed cold drawn tubes. Hot finished tubes will be held to the above tolerances for surface plate measurement but, due to irregularities of the tube surface, a dial indicator cannot accurately register the variation from straightness.

LENGTH TOLERANCES

Hot Finished and Cold Drawn

Standard tolerances on commercially exact lengths are:

Tubes cut 4' and shorter	Plus 1/16"	Minus .000"
Over 4' to 10' inclusive	Plus 3/32"	Minus .000"
Over 10'	Plus 1/8"	Minus .000"

BOILER TUBES

Seamless Steel Quality

Many of the sizes listed can also be supplied in Lapweld Steel and Charcoal Iron grades.

Ryerson tubes are manufactured and tested in accordance with the latest Rules and Regulations of the Board of Supervising Inspectors, Bureau of Navigation and Steamboat Inspection.

Tubes are required to be full thickness at thinnest point. Our seamless tubes never underrun.

They conform to the A.S.T.M. Specification for Lapwelded, Seamless and Lapwelded Charcoal Iron Boiler Tubes, Serial designation A-83-40 and with the ASME power boiler code, 1939 edition.

Ext. Dia. In.	Thick. B. W. Ga.	Wt. Per Ft. Lbs.	Random Lengths, Ft.
1	13	1.037	4 to 20
1¼	13	1.328	4 to 20
1½	13	1.619	4 to 20
1¾	13	1.910	4 to 20
2	13	2.201	4 to 24
2	12	2.503	4 to 24
2	11	2.726	4 to 24
2	10	3.018	4 to 24
2¼	13	2.492	4 to 20
2¼	12	2.837	4 to 20
2½	12	3.171	4 to 20
2½	10	3.835	4 to 18
2¾	12	3.504	4 to 20
2¾	10	4.244	4 to 16
3	12	3.838	4 to 20
3	10	4.652	4 to 20′1″
3	9	5.110	4 to 18
3	8	5.674	Clev.
3¼	11	4.555	4 to 20
3¼	10	5.061	4 to 20
3½	11	4.921	4 to 20
3½	10	5.469	4 to 18
3½	9	6.012	4 to 18
4	10	6.286	4 to 22
4	9	6.915	4 to 20
4	8	7.693	4 to 20
4	6	9.336	4 to 20
4½	10	7.103	4 to 20′1″
5	9	8.720	4 to 20′1″
6	7	12.750	4 to 24

Tubes 4′0″ and longer cut to length no charge, net length basis. For lengths under 4′0″, a special cutting charge is to apply on a net length basis.

BENT BOILER TUBES

We are in position to promptly furnish. Bent Boiler Tubes for all standard types of boilers. Let us have name and type of boiler and tube number for quotation.

COPPER BOILER TUBE FERRULES

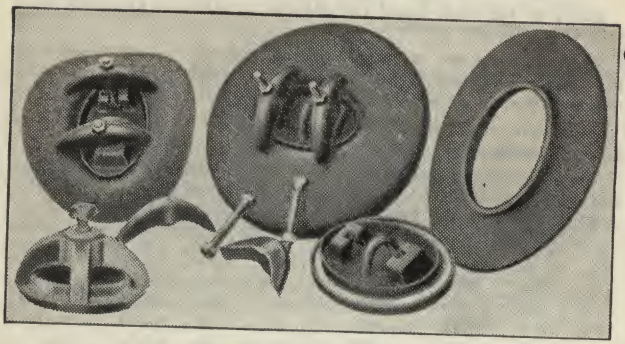
Flanged Ferrules and special sizes of either plain or flanged ferrules can be furnished promptly from the factory.

Inside Diam. in Inches	Width in Inches	1/32 Thick Per 100 Pieces List Price	1/32 Thick Per 100 Pieces Wt. Lbs.	1/16 Thick Per 100 Pieces List Price	1/16 Thick Per 100 Pieces Wt. Lbs.
1½	⅝	$9.30	3.03	$17.00	6.19
1½	¾	12.90	3.63	20.00	7.41
1¾	⅝	10.80	3.53	20.25	7.18
1¾	¾	12.90	4.23	24.25	8.62
1⅞	⅝	....	....	21.50	7.68
1⅞	¾	....	....	26.00	9.22
2	⅝	12.30	4.02	23.00	8.18
2	¾	14.80	4.83	27.75	9.81
2¼	⅝	13.50	4.52	25.25	9.17
2¼	¾	16.30	5.42	30.50	11.00
2½	⅝	15.00	5.02	28.25	10.16
2½	¾	18.10	6.02	34.00	12.19
2¾	⅝	....	....	41.00	13.34
3	¾	21.90	7.21	41.00	14.57
3½	¾	24.60	8.40	45.75	16.95
4	¾	33.60	9.54	63.00	19.28

Tank Fittings 204
Welding Flanges 208
Babbitt 210
Blr. Tube Babbitt 203
Welding Rod 213
Bolts Rein 22
Data 243

BOILER AND TANK FITTINGS

Shipped from our Chicago Plant



MANHOLE COVERS

Ryerson Manhole Covers 10"x16", 11"x15" and 12"x16" are pressed from A.S.T.M. A-70 Firebox Quality Steel. They are designed to withstand a pressure of 250 pounds and conform to A.S.M.E. Code Requirements. The arches are also pressed steel. Standard machine bolts are used. Asbestos copper insert gaskets are usually supplied although other types can be furnished if desired.

Size No.	Nominal Size, Inches	Size No.	Nominal Size, Inches	Size No.	Nominal Size, Inches
1	9x14	3	11x15	5	18x22
2	10x16	4	12x16		

Nos. 1 and 5 are cast iron and are made up on order.

PRESSED STEEL ARCHES

Pressed from Open Hearth Steel Plate. Slightly flattened on ends to give good bearing surface. Carried in stock for Immediate Shipment in the following sizes:

Size No.	Height Inches	Spread Inches	Size No.	Height Inches	Spread Inches
1 and 2	4-1/2	13	4	5-1/4	15-3/4
3	5	14-1/4	5	8	19-5/8

HANDHOLE COVER PLATES

Flat Cast Iron Handhole Cover Plates and Crabs, complete with Bolt and asbestos gasket furnished immediately from stock in the sizes listed below. Cast Iron Cover Plates furnished curved to fit a dished head or a shell with either long or short dimension girthwise. Forged Steel covers can also be furnished promptly.

Nominal Size Inches	Approximate Weight	Punching Hole Cover Plate & Fittings, Complete	Cover Plate Crab, Bolt and Gasket	Cover Plate Crab and Bolt
*3 x4	7	$4.25	$2.25	$2.00
3½x5½	13	4.80	2.80	2.50
*4 x6	15	5.80	3.55	3.25
5 x7	23	6.90	4.40	4.00
6 x8	25	8.40	5.65	5.00
6 x9	26	9.70	6.70	6.00

* Pressed Steel Covers and Crabs in these sizes furnished promptly. Prices for Pressed Steel Handholes on Application.

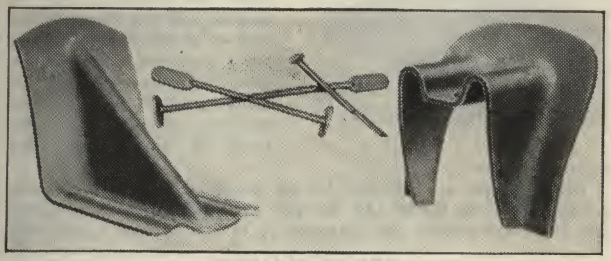
MANHOLE SADDLES

Manhole Saddles can be made in all standard sizes ⅜" to 3" thick and will be curved to fit shells or heads. Specify, if saddles are to be used for A.S.M.E. Code work. Write for descriptive literature.

BOILER AND TANK FITTINGS—(Cont'd)

PRESSED STEEL BOILER HANGERS

Shipped from our Chicago Plant



Lugs Braces Hangers

Made of A.S.T.M. A-70 Flange Quality Steel, to A.S.M.E. Code requirements for Riveted Construction. Designed to give maximum strength and rigidity with minimum amount of weight. Depressed portion is drilled for suspension bolts. Hot formed over special tools to assure uniform curvature. They can be punched and easily attached by riveting.

Size of Hanger	36	42	48	54	60	66	72	78	84
Thickness of Mat.	3/16	1/4	5/16	3/8	7/16	1/2	1/2	9/16	5/8
Price each	$3.17	$3.38	$4.05	$4.32	$5.18	$5.55	$7.08	$7.76	$7.95

PRESSED STEEL BOILER LUGS

Best's Lugs are pressed hot from A.S.T.M. A-70 Flange Quality Steel over special dies to produce a uniform product, neat in appearance and easy to apply. The shape of the lug combines unusual strength with minimum weight. The grooves in the bottom permit the use of rollers and keep the rollers in proper position. The lugs can be punched for attaching to the boiler, and riveted without flange interference. A.S.M.E. Code Requirements permit the use of these lugs on all horizontal tubular boilers 72" diameter and smaller.

Diam. Boiler In.	30	36	42	48	54	60	66	72	78
List price	$1.92	$2.19	$2.33	$2.54	$3.11	$3.38	$4.05	$4.45	$4.90
Weight, Pounds	6	8	10½	13	20½	25	34	40	46
Thickness	3/16	1/4	1/4	5/16	5/16	3/8	3/8	7/16	1/2
Height on Boiler	7¼	7¼	7½	7½	9½	9½	11	11	11
Length, Projection	7¼	7¼	7½	7½	9½	9½	11	11	11
Width of Lug	8	8	8	8	10	10	12	12	12
Height Above Ctr.	1	2	2⅞	3⅞	3½	3½	4½	5	6

42-inch lugs fit 44-inch boilers perfectly and are furnished when 44-inch lugs are ordered.

WELDLESS STEEL BOILER BRACES

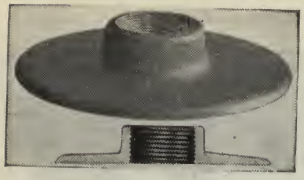
Shipped from our Chicago Plant

Conform to A.S.M.E. Boiler Code requirements. Upset and forged from Open Hearth Steel rounds of 60,000 pounds tensile strength. Shell and head ends equal body strength after punching with standard size holes.

Diameter of Brace	Dimensions of Head End	Dimensions of Shell End
1¼	11/16x2⅝x6½	11/16x3¼x8½
1 3/16	9/16x2⅝x6½	11/16x3¼x8½
1⅛	½x2⅝x6½	9/16x3¼x8½

Welding Rod 213
Bolts Rein 221
Data 243

RYERSON FORGED STEEL FLANGES



Forged from a solid billet of steel. Core is punched out under the hammer so that the threads will run flush with the bottom of the flange. Flanges are symmetrical and lathe finished to a beveled edge for caulking. Rivet holes can be punched without injuring the steel. All threads are tested before shipment.

Boiler flanges are intended for use on boilers and pressure tanks (steam pressures up to 125 lbs. per square inch); Marine flanges are made extra heavy for pressures up to 250 lbs. per square inch.

BOILER FLANGES

Size in Inches	Outside Diameter	Thickness	Depth of Hub	Approx. Weight	Price Threaded	Price Plain
3/4	6	5/16	1	3	$1.70	$1.60
1	6	5/16	1	3	1.80	1.60
1 1/4	6 1/2	5/16	1	5	1.95	1.75
1 1/2	7	3/8	1 1/4	5 1/2	2.25	2.05
2	8	3/8	1 1/4	6	2.50	2.35
2 1/2	8 1/2	3/8	1 1/2	6 1/2	2.60	2.45
3	9	3/8	1 1/2	8	2.80	2.65
4	10	7/16	1 3/4	10	3.50	3.35
5	11 1/2	1/2	2	18	5.00	4.75
6	12 1/2	1/2	2	20	6.00	5.70
8	15	5/8	2 1/2	32	12.00	11.40
10	17 1/2	3/4	2 1/2	44	25.00	21.00
12	20	13/16	3	60	30.00	26.00

MARINE FLANGES

Shipped from our Chicago Plant

Size in Inches	Outside Diameter	Thickness	Depth of Hub	Approx. Weight	Price Threaded	Price Plain
3/4	6	7/16	1 1/8	4	$2.10	$2.00
1	6	7/16	1 1/8	4	2.20	2.10
1 1/4	6 1/2	7/16	1 1/4	5	2.30	2.18
1 1/2	7	1/2	1 3/8	5	2.40	2.28
2	8	1/2	1 1/2	6	2.50	2.35
2 1/2	8 1/2	1/2	1 5/8	9	2.60	2.45
3	9	9/16	1 5/8	10	2.80	2.65
3 1/2	9 1/2	9/16	1 3/4	14	3.20	3.00
4	11	9/16	2 1/4	21	3.50	3.35
5	12 1/2	3/4	2 3/4	38	5.00	4.75
6	13 1/2	3/4	3	40	6.00	5.70

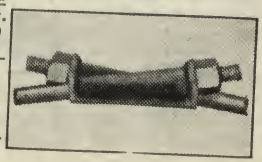
Extras for Odd Flanges

Flanges 7 in. and smaller, bent to smaller than 18 in. but not under 14 in., 50% extra.

Bending flanges 8 in. and larger to circles under 24 in., flanges larger O. D. than Standard, Hillside flanges or other irregular flanges—special prices. Write for discounts.

MALLEABLE IRON TANK LUGS—SIDE PULL

Size of Rod Inches	App. Wt. Per 100 Pieces	Size of Rod Inches	App. Wt. Per 100 Pieces
1/2	70	7/8	225
5/8	100	1	240
3/4	130		



BOILER AND TANK FITTINGS—(Cont'd)

Shipped from our Chicago Plant

STEEL BOILER AND FITTING UP BOLTS

Dia. in Inches	Length in Inches	List Price 100 Bolts	Dia. in Inches	Length in Inches	List Price 100 Bolts	Dia. in Inches	Length in Inches	List Price 100 Bolts
½	1½	$6.50	⅝	2	$11.45	¾	2	$14.95
½	2	6.85	⅝	2½	11.95	¾	2½	15.60
½	2½	7.25	¾	1½	14.30	¾	3	16.25
⅝	1½	10.95						

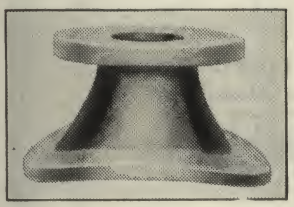
EUREKA JOINT CEMENT

For painting exteriors and interiors of gas holders, water tanks, metal roofs, iron or steel vats, bridges and boiler shells.

Furnished in 10, 25, 50 and 125 lb. packages, 200 pound kegs, 400 pound half barrels.

SEAMLESS FORGED STEEL BOILER NOZZLES

Sweep Type—150 lb. Steel—American Standard



Top Flange			Saddle Flange	
Diam.	Thick-ness	Approx. Length	Diam.	Thick-ness
6	⅝	4	10	½
7½	¾	4	11½	7/16
9	15/16	5	13½	½
11	1	5	15½	½
13½	1⅛	5	18	9/16
16	1 3/16	6½	20½	¾
19	1¼	6½	24	¾
21	1⅜	6½	26½	⅞

Prices on application. Write for discounts and extras for special sweeps, etc.

COPPERED BESSEMER ROD

4, 6 and 12 Ft. Lengths—Burlapped

Diam. in Inches	Approx. Wt. Per 100 Ft.	W & M Gauge or Inches	Approx. Wt. Per 100 Ft.	W & M Gauge or Inches	Approx. Wt. Per 100 Ft.
⅝	N.Y. 104.10	7/32	12.76	No. 11	3.88
½	66.60	No. 6	9.83	No. 12	2.97
7/16	51.05	3/16	9.38	3/32	2.35
13/32	43.40	No. 7	8.36		
⅜	37.51	No. 8	7.00	No. 13	2.23
11/32	37.51	5/32	6.52	No. 14	1.71
5/16	26.10	No. 9	5.87	No. 15	1.39
9/32	21.10	No. 10	4.87	No. 16	1.05
¼	16.67	⅛	4.17		

Welding Rod 213
Bolt Reir 22
Data 243
C...

WELDING FLANGES

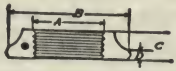
Drop Forged Steel

All welding flanges carried threaded from top

"A" Dimension refers to Pipe Sizes

EXTRA HEAVY FLAT FLANGES

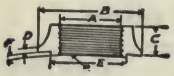
Shipped from our New York Plant



No.	A	B	C	D	Wt. Lbs.
3306	3/4"	2 1/4"	3/4"	1/4"	47
3308	1"	2 1/2"	3/4"	1/4"	52
3310	1 1/4"	2 15/16"	3/4"	1/4"	69
3312	1 1/2"	3 1/4"	3/4"	1/4"	88
3316	2"	3 3/4"	3/4"	1/4"	107
3320	2 1/2"	4 5/16"	1"	1/4"	148
3324	3"	5 1/2"	1"	1/4"	270
3328	3 1/2"	5 15/16"	1"	1/4"	315
3332	4"	6 1/2"	1 1/8"	1/4"	390

EXTRA HEAVY CURVED FLANGES

Shipped from our Chicago Plant



No.	A	B	C	D	R	Wt. Lbs.
3520	2 1/2	4 5/16	7/8	1/4	30	150
3524	3	5	7/8	1/4	30	225
3528	3 1/2	5 5/8	7/8	1/4	30	240
3532	4	6	7/8	1/4	30	319

STANDARD HEAVY CURVED FLANGES

Shipped from our Chicago Plant

No.	A	B	C	D	E	F	R	Wt. Lbs.
3112	1 1/2"	3 1/8"	7/16"	1/16"	2 11/32"	1/16"	12	50
3116	2"	3 19/32"	7/16"	1/16"	2 23/32"	1/16"	15	64
3120	2 1/2"	4 3/8"	3/4"	1/16"	3 1/16"	1/16"	22	120
3124	3"	4 7/8"	3/4"	1/16"	3 11/16"	1/16"	22	130
3128	3 1/2"	5 1/8"	3/4"	1/16"	4 3/16"	1/16"	26	135
3132	4"	5 13/16"	3/4"	1/16"	4 3/4"	1/16"	22	205

LARGE SIZE EXTRA HEAVY FLANGES

Flat or Curved

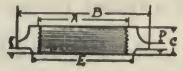
Size A	B	C	D	In Stock At	Wt. Lbs.
5"	7 1/2"	1 1/2"	3/8"	Chgo.	7
6"	8 1/2"	1 1/2"	3/8"	N.Y.	8
8"	10 1/2"	1 3/4"	1/2"	"	12
10"	13"	2"	1/2"	Chgo.	16
12"	15"	2"	1/2"	"	22

ALLEGHENY METAL WELDING FLANGES

See Stainless Steel Section

WELDING FLANGES—(Cont'd)

STANDARD HEAVY FLAT FLANGES



No.	A	B	C	D	E	F	Wt. Lbs.
3001	1/8"	1 1/2"	13/32"	3/64"	1 5/32"	3/32"	10
3002	1/4"	1 1/2"	13/32"	3/64"	1 5/32"	3/32"	11
3003	3/8"	1 1/2"	13/32"	3/64"	1 5/32"	3/32"	15
3004	1/2"	1 7/8"	9/16"	3/64"	1 1/4"	3/32"	18
3006	3/4"	2"	5/8"	1/16"	1 9/32"	3/32"	25
3008	1"	2 1/4"	3/4"	1/16"	1 3/4"	3/16"	32
3010	1 1/4"	2 11/16"	3/4"	1/16"	1 7/8"	3/16"	37
3012	1 1/2"	3 3/64"	3/4"	1/16"	2 1/32"	3/16"	58
3016	2"	3 1/2"	3/4"	1/16"	2 33/32"	3/16"	64
3020	2 1/2"	4 1/16"	1"	1/16"	3 3/16"	3/16"	104
3024	3"	4 5/8"	1"	1/16"	3 11/16"	3/16"	108
3028	3 1/2"	5 1/8"	1"	1/16"	4 3/16"	3/16"	140
3032	4"	5 13/16"	1 1/8"	1/16"	4 3/4"	3/16"	216

HEAVY TANK FLAT FLANGES

No.	A	B	C	D	E	In Stock At	Wt. Lbs.
3202	1/4"	1 1/4"	5/16"	1/8"	3/4"	Chgo.	5
3203	3/8"	1 1/4"	5/16"	1/8"	15/16"	"	6
3204	1/2"	1 1/2"	7/16"	1/8"	1 1/8"	N.Y.	13
3206	3/4"	1 3/4"	5/8"	1/8"	1 3/8"	"	16
3208	1"	2 1/8"	5/8"	5/32"	1 11/16"	"	34
3210	1 1/4"	2 1/2"	3/4"	5/32"	2"	"	35
3212	1 1/2"	3"	3/4"	5/32"	2 3/8"	"	42
3216	2"	3 1/2"	3/4"	5/32"	2 7/8"	"	70
3220	2 1/2"	4 1/2"	1"	7/32"	3 5/8"	"	135
3224	3"	5"	1"	7/32"	4 1/8"	"	145
3228	3 1/2"	5 1/2"	1"	7/32"	4 5/8"	Chgo.	170
3232	4"	6"	1 1/8"	1/4"	5 1/8"	"	187

METAL WORKERS MARKING CRAYONS

Sizes in Stock

1/4" Round, 5" long	3/16"x1/2"x5" long
1/4" Square, 5" long	3/16"x1/4"x5" long

Genuine Talc. In boxes containing one gross.

MARKAL PAINT STICKS

Two grades are carried in stock in our Chicago Plant. Type "C" (packed 12 to a unit package, 12 packages to a gross carton) for marking cold surfaces, and type "H" (packed 36 to a unit package, 4 packages to a gross carton) for marking hot surfaces up to 1500° F.

One polished metal holder is sent with every package of the "C" grade, and two wooden holders with every package of the "H" grade.

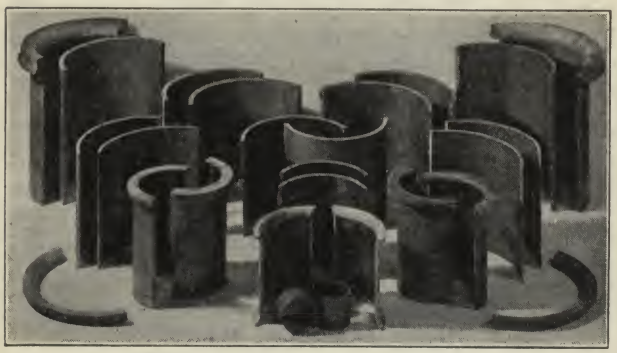
Welding Rod 213
Bolts Rein 221
Data 243
C...

COPPER AND BRASS SHEETS, BARS, ETC.

Copper and Brass Sheets, Bars, Strip, Tubing, Pipe, etc., can be furnished promptly.

RYERTEX BEARINGS

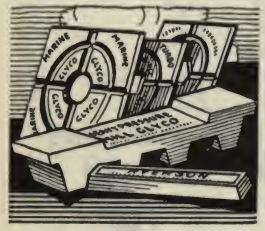
(Reg. U. S. Pat. Off.)



Ryertex non-metallic bearings are made from a strong textile material saturated with a synthethic resin, and prove highly satisfactory for heavy duty applications—particularly in the paper and steel manufacturing industries.

They may be water-lubricated, eliminating the cost and bother of oil and grease. Comparative tests from many Ryertex-equipped units testify to longer life, reduced power consumption and lower maintenance costs as the result of Ryertex installation. Initial cost is moderate and installation is simple. Oil lubrication may be used if desired. Describe your bearing problems to us. We will gladly send a portfolio giving actual case studies and complete information.

RYERSON BABBITT METALS



A lead base babbitt made from virgin metal by a special process that results in a dense, close grained physical structure which gives maximum wear resistance. Glyco is manufactured in our own plant and is guaranteed to be absolutely uniform, homogeneous, clean and free flowing. Recommended applications are based on thirty-five years of actual performance of the metal.

Turbo "Glyco"

Our highest grade. It has proved highly successful under severe service. Turbo and Marine replace expensive tin base metals to advantage and have shown excellent results in electrical machinery, turbines, rotary pumps and other machinery where the bearings are subject to heavy pressure and high speeds. Brinell hardness from 29.7 to 34.4.

Marine "Glyco"

One of our two highest grades. It is intended for severe applications where the exceptional qualities of Turbo Glyco are not deemed necessary. An excellent bearing metal for electric motors. Brinell hardness from 26 to 29.

Standard "Glyco"

A splendid grade for any ordinary conditions of service. Used for general repair purposes. Brinell hardness from 22 to 25.

RYERSON BABBITT METALS
GLYCO BABBITT METAL (Cont'd)

Heavy Pressure Mill 'Glyco"

Especially designed for heavy duty service where operating temperatures are high. Used for roll neck bearings, in steel mills, cement mills and similar applications where a high grade moderate priced babbitt is needed. Brinell hardness from 21.5 to 24.

Transmission "Glyco"

Recommended for use where the stresses are unimportant and the requirements do not warrant the use of a high grade metal. Widely used on light machinery and shafting where a low-priced babbitt is required. Brinell hardness from 21 to 23.

Each grade of Glyco is carried in stock.

Packed in 10, 25, 50, 100 and 250 lb. boxes.

Can also be furnished in pigs weighing about 40 lbs.

Genuine Babbitt
Ryerson Certified

Tin base alloys certified to be made from high grade virgin materials.

Grade 2. Soft. Conforms to A.S.T.M. Specification B-23-26. Grade 2. Made to original Isaac T. Babbitt formulae. Recommended for bearing applications where a tough, genuine babbitt is required. Brinell hardness from 25.9 to 27.8.

Grade 3. Hard. Conforms to A.S.T.M. Specification B-23-26. Grade 3. Recommended for bearing applications subjected to unusually high pressure and speeds. Brinell hardness from 29.5 to 32.0

Genuine Babbitt is made in bars, weighing approximately 3 lbs. and boxed in 25, 50, 100 and 250 lb. units.

Plus Four Babbitt

A number four analysis made entirely from new metals and guaranteed to be uniform.

SOLDER

Ryerson Solder

"Ryerson Guaranteed" solder is manufactured entirely from virgin material.

Stocks include solder for Allegheny Metal, Dairy Solder melting at 450° F. and Allegheny Solder melting at 350° F.; "60-40," "50-50," "48-52," "45-55," "40-60," and "30-70". Other specifications can be furnished promptly.

These solders represent the maximum in quality. Can be furnished in tinners' bar (1½ lbs.), handy bar (½ lb.) and capping or meter bar (¼ lb.).

Boxed in 10, 25, 50, 100 and 250 lb. units.

All-Sol Soldering Flux

A special flux used in soldering Allegheny Metal and other 18-8 Stainless Alloys. All-Sol is particularly well suited for use on all hard-to-solder metals except aluminum. Stocked in pints, half gallons and gallons.

BABBITT FURNACES AND LADLES

Rowell Furnaces are designed for melting and mixing non-ferrous metals. The molten metal is drawn off from the bottom, thus reducing the loss of metal from oxidation. They are made in 500, 1,000 and 2,000 lbs. pot capacity; arranged for burning coal, coke, wood or gas.

Rowell Ladles also allow pouring from the bottom of the metal, making skimming of the oxide unnecessary. These are carried in stock in lead capacities of 4½, 9, 18, 25 and 40 lbs.

welding Rod 213
Bolts Rein 221
Data 243

McKAY STAINLESS ELECTRODES

The McKay "Certified" Stainless Steel Electrodes introduce one of the most important contributions to the field of high quality stainless steel fabrication—"THE CERTIFIED WELD ANALYSIS". Under this plan, representative sample electrodes are selected from each heat of steel and are tested for weld deposit analysis. These test electrodes are used with recommended current ranges and in accordance with good welding practice to build a pad of weld metal of a sufficient number of layers so that it is uncontaminated with the parent metal. Drillings are then taken and analyzed very carefully and the resulting analysis stamped on and certified to, on each package of electrodes.

Under such conditions the fabricator is in a position to know exactly what his weld metal will contain and satisfactory results are assured.

Each McKay Stainless Electrode is stamped with the stainless type classification to which it belongs. This identification is impressed by means of a die into the core wire itself on the bare portion and presents a positive knowledge to the operator of the type of electrode being used. This is a much superior method of identification over those used by other manufacturers employing color bands, or color dies in the coating itself.

McKay Stainless Electrodes are manufactured in 18" lengths with center grip to minimize stub waste. The coating is applied by the extrusion method, which is generally accepted as the superior process and provides a coating of uniform thickness and density.

All McKay Stainless Electrodes are wrapped in five pound packages which are then dipped in wax making them air-tight and moisture proof. Five of these packages are packed in standard 25 lb. cartons.

Electrodes for welding stainless steel other than those listed can be furnished promptly. We invite you to consult us for further information and for recommendations regarding your special problems.

McKAY STAINLESS 18-8

Type Nos. 304-308

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
.075	18	1/8	18	3/16	18
3/32	18	5/32	18		

McKAY STAINLESS 18-8—MO

Type No. 317

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
3/32	18	1/8	18	5/32	18	3/16	18

McKAY STAINLESS 18-8—CB

Type No. 347

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
3/32	18	1/8	18	5/32	18	3/16	18

McKAY STAINLESS 25-12

Type No. 309

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
3/32	18	1/8	18	5/32	18	3/16	18

McKAY STAINLESS 35-15

Type No. 330

Dia.	Lgth.	Dia.	Lgth.
1/8	18	5/32	18

WELDING ELECTRODES

Wire 218

Wire Rope 219

HOLLUP PROTECTED ARC TYPE SUREWELD "A"

For High Speed Flat Welding Only—Reverse Polarity

Sureweld "A" has been designed for heavy plate welding in the flat position only. Typical applications are machine bases, gas cylinders, and class 1 and 2 pressure vessels.

It is a heavy coated fully protected electrode conforming to all the requirements of specifications for class 1 welding. This rod utilizes high current, giving a high melting rate, which, in turn, gives a greater amount of deposited metal per hour. The efficiency of this electrode is very high, due to the minimum of splatter and slag loss. It conforms with ASME specifications U-68 and U-69, AWS specifications E-10 and E-20, Hartford Steam Boiler Inspection and Insurance Company, and other class 1 welding requirements.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
5/32	14	1/4	14,18	3/8	18
3/16	14,18	5/16	18		

HOLLUP PROTECTED ARC TYPE SUREWELD "B"

For Welding Flat, Vertical, Overhead—Reverse Polarity

Sureweld "B" is a general purpose electrode for use where maximum physical properties are desired such as pressure vessels, shipbuildings, pipe lines, tanks and structural work. This rod is the most efficient of its type on the market today due to its smooth, fast flowing arc, giving the very minimum of slag and splatter loss. It conforms with ASME specifications U-68 and U-69, AWS specifications E-10 and E-20, Hartford Steam Boiler Inspection and Insurance Company and other class 1 welding requirements.

Sureweld "B" produces welds of high tensile strength and high ductility. The following average physical properties apply:

Tensile strength.....65,000 to 75,000 lbs. per sq. in.
Elongation.....22 to 30% in 2"
Impact.....35 to 70 ft.-lbs. (Izod)

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
1/8	14	3/16	14	1/4	14,18	3/8	18
5/32	14	7/32	14	5/16	14,18		

HOLLUP PROTECTED ARC TYPE SUREWELD "N"

For High Speed Welding of All Positions Straight Polarity

Sureweld "N" is especially recommended for high speed, single pass welding on jobs where the set-up is apt to be poor. In this type of work Sureweld "N" excels, due to its ease of operation, smoothness of bead, economy, etc. Multiple layer welds are also very satisfactorily made with this electrode. This rod will pass the standards for class 1 welding. Sureweld "N" is recommended for straight polarity when used with DC equipment, but is also satisfactory for welding on AC with the larger types of transformers.

Welding Rod 213

Bolts Rein 221

Data 243

Physical properties of the weld metal produced with Sureweld "N" will average somewhat higher in tensile strength than welds made with Sureweld "B", but the ductility will be correspondingly less.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
*3/32	18	5/32	14	7/32	14	5/16	14,18
1/8	14	3/16	14	1/4	14,18	3/8	18

* Center grip.

WELDING ELECTRODES—(Cont'd)

HOLLUP PROTECTED ARC TYPE SUREWELD "F"

For Fillet Welding—Straight Polarity or A.C.

Sureweld "F" is a fully protected arc electrode which has been especially designed to produce exceptionally good, flat, uniform fillets with no undercut. In the smaller diameters it is excellent for the high speed welding of thin sheets.

Sureweld "F" electrodes will operate equally satisfactorily on AC or DC equipment. When DC equipment is used straight polarity is recommended for best results.

In operation, Sureweld "F" has an unusually quiet arc with practically no splatter. The deposited metal will have high physical properties and will be exceptionally smooth and uniform. In cases where appearance of weld is a factor, this feature is very important.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
*3/32	18	5/32	14	1/4	18
1/8	14	3/16	14,18	5/16	18

* Center grip.

HOLLUP PROTECTED ARC TYPE SUREWELD "C"

For All Position Welding With A.C. Transformers

Sureweld "C" is used in welding where the smaller types of AC transformer equipment is utilized. It is a fully protected arc electrode producing welds that have high tensile strength and good ductility. The rod is fast flowing with a soft arc with a minimum of splatter loss and slag.

An outstanding feature of Sureweld "C" is its ability to be started instantaneously without the usual difficulty encountered with most electrodes when used on low voltage AC equipment.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
*.075	18	1/8	14	3/16	14
3/32	14	5/32	14	1/4	14

* Center grip.

HOLLUP REX PROCESSED—No. 30S

Carbon 0.10 to 0.15
A.W.S. Specifications E-No. 1-B

These electrodes are considered standard for general utility welding of mild steel. The rod gives exceptional arc stability. The coating completely vaporizes at arc temperature and forms a very good electrical conductor. The arc always pulls squarely from the bottom center of the electrode, the metal passing across in evenly divided drops. Suitable for welding in overhead and vertical positions. Especially good for outside erection work. Recommended for fabricating steel tanks, structural shapes, etc., where maximum output, coupled with a good weld, is required. For D. C. welding only.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
1/16	14	1/8	14	3/16	14
3/32	14	5/32	14	1/4	14

WELDING ELECTRODES—(Cont'd)

HOLLUP WANAMAKER COATED—No. 3

Carbon 0.10 to 0.15—A.W.S. Specifications E-No. 1-B

This electrode is designed for those who desire a fast flowing welding rod combined with maximum ease of operation. It is widely used with D.C. welders where extremely stable arc characteristics are required. Recommended for welding mild steel parts.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
3/32	14	5/32	14	1/4	14
1/8	14	3/16	14		

HOLLUP HIGH CARBON WANAMAKER COATED—No. 7

Carbon 0.85 to 1.10—A.W.S. Specifications E-No. 1-C
(Reverse Polarity)

This is a very high carbon rod and the welds made with it may be treated the same as any high carbon steel free from alloys. An unusually large amount of the carbon in the rod is carried over into the deposits, producing a surface which has a great resistance to abrasive wear. Deposits are not readily machinable but can be ground as desired. When deposited on mild steel, a single layer bead will show a Brinell hardness of 293 and a multiple layer bead will show 331. Work hardening will raise these figures to 331 and 375 respectively.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
1/8	14	5/32	14	3/16	14	1/4	14

HOLLUP—FOR CAST IRON—CI 8

(Reverse Polarity)

An electrode for welding cast iron and light gauge sheets. Perfect fusion is secured with the least possible penetration, resulting in a fusion zone of minimum width together with negligible dilution of the deposit metal, making the deposit easily machinable. In using this electrode for welding cast iron, we recommend reverse polarity. Preheating is unnecessary. It can also be used to advantage with A. C. equipment.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
3/32	14	5/32	14	1/4	14
1/8	14	3/16	14		

HOLLUP HARD SURFACING

In view of the many and varied conditions of service under which hard faced or surfaced materials must operate, we suggest you submit your particular problem to us for recommendation of the proper type of rod to use.

We can furnish promptly many various grades and analyses of hard surfacing rods including Stoody and Stellite, each designed to meet certain requirements of service and ranging in price from a few cents to several dollars per pound. It is important that the actual conditions of service be known to permit selection of the rod best suited for the purpose.

Bolts Rein 221
Data 243

WELDING ELECTRODES—(Cont'd)

HOLLUP FLUX COATED PHOSPHOR BRONZE—No. 20B

(Reverse Polarity)

This electrode is furnished with a dipped coating which stabilizes the arc and produces welds of maximum density, ductility and tensile strength. It is intended for the welding of copper, brass, bronze, galvanized iron, wrought iron, malleable iron, cast iron and cast steel. A better bond will be obtained on copper and copper alloys if the parent metal is preheated before welding. Iron or steel parts should be left cold. Welds produced will be very dense with a tensile strength of 35,000 to 40,000 lbs. per sq. in. The weld is readily machinable even on cast iron. Furnished in all diameters 18" long.

HOLLUP 3½% NICKEL STEEL FLUX COATED—No. 2320

A.W.S. Specifications E-No. 1-G Nickel Steel
(Reverse Polarity)

This nickel steel rod produces welds having approximately 60,000 pounds tensile strength. The welds have moderate abrasion resisting qualities without sacrificing machinability. Deposits of this electrode are particularly suited to case hardening, which produces an extremely hard wearing surface with a tough backing. Recommended for welding shafts, and locomotive tractor, auto parts, etc. Also used for welding mild steel sections.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
1/8	14	5/32	14	3/16	14	1/4	14

HOLLUP HIGH MANGANESE STEEL—No. 9

Manganese 13% to 15%—Carbon .85% to 1.00%
Nickel 3.5% to 4.5%

This is a heavy flux coated 14% manganese steel rod. It produces deposit characteristics closely approximating the parent metal. The arc is very stable, allowing the deposit to be laid down smoothly, which materially reduces the time required in grinding down the weld. When deposited on high manganese steel, the weld will show a Brinell hardness of 197. This will work-harden to 485. Recommended for resisting severe impact and abrasion as encountered on switch points, cross-overs, dipper teeth, etc. Also furnished bare in 18" lengths.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
1/8	18	5/32	18	3/16	18	1/4	18

Specify if for A.C. or D.C. Welding.

RYERSON QUALITY BROWN PROCESSED

Carbon 0.13 to 0.18—A.W.S. Specifications E-No. 1-B

This is a processed mild steel rod preferred by many production welders. It melts faster than rods in the lower carbon group. However, the penetration is less. Especially suitable for overhead and vertical welding and production welding in the flat position. Recommended for shop fabrication of mild steel plates and structural members.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
1/8	14	5/32	14	3/16	14	1/4	14

RYERSON QUALITY ACETYLENE WELDING RODS

COPPER COATED No. 206

A.W.S. Specif. G.-No. 1-A—Carbon .06 Max.

A high quality copper coated pure iron rod, low in carbon and manganese. It flows smoothly and uniformly under the torch, giving a ductile non-porous weld, free from gas pockets and slag inclusions. For welding mild steel where highest quality welds are required.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
1/16	36	1/8	36	3/16	36	5/16	36
3/32	36	5/32	36	1/4	36		

CAST IRON

A cast iron rod of the highest quality, low in manganese, phosphorus and sulphur and free from sand and grit.

Round				Square			
Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
1/8	12	5/16	24	3/16	24	3/8	24
3/16	24	3/8	24	1/4	24	1/2	24
1/4	24			5/16	24		

3½% NICKEL STEEL

A.W.S. Specifications No. 1-G Nickel Steel

An S.A.E. 2320 analysis rod for mild and nickel steel welding where high tensile strength welds are desired.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
1/8	36	3/16	36	1/4	36

TOBIN BRONZE

(Genuine Anaconda)

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
1/16	36	1/8	36	3/16	36	1/4	36

ALLEGHENY STAINLESS 18-8 BARE

19% Chromium—9% Nickel—Carbon .08 Max.

For acetylene welding of stainless type No. 302 and other steels of the 18-8 variety.

Dia.	Lgth.	Dia.	Lgth.	Dia.	Lgth.
1/16	36	1/8	36	3/16	36
3/32	36	5/32	36		

RYERSON WELD FILLER

The use of Ryerson Weld filler minimizes grinding operations and gives a smooth, clean appearance to your painted jobs. It comes in powder form ready for mixing with water to form a paste of putty-like consistency. Carried in stock in 12 lb. cans.

RYERSON CAST IRON WELDING FLUX No. 3

A high grade mixture which gives unusually good results in the welding of cast iron by the acetylene torch method. Carried in stock in 1 lb. cans.

RYERSON BRAZING FLUX No. 2

A special high grade flux for use with brass or bronze rods. Carried in stock in 12 oz. cans.

Bolts Rein' 221
Data 243

ROUND WIRE

BRIGHT BASIC AND SOFT BRIGHT BASIC

Catch Weight Coils

W & M Ga., or Inches	Net Extra for Size	Wt. Per 100 Ft., Lbs.	W & M Gauge	Net Extra for Size	Wt. Per 100 Ft., Lbs.
1/2	.20	66.80	No. 8	Base	7.00
7/16	.20	51.10	No. 9	"	5.87
3/8	.20	37.60	No. 10	.05	4.86
5/16	.20	26.10	No. 11	.10	3.87
No. 2	.20	18.38	No. 12	.15	2.97
1/4	.10	16.70	No. 13	.25	2.23
No. 3	.10	15.84	No. 14	.35	1.71
No. 4	.10	13.54	No. 15	.55	1.38
No. 5	.10	11.43	No. 16	.75	1.04
No. 6	Base	9.83	No. 17	1.00	.78
No. 7	"	8.36	No. 18	1.50	.60

Bright wire No. 13 and lighter is soft quality.

BLACK SOFT ANNEALED WIRE

Catch Weight Coils

W & M Gauge or Inches	Net Extra for Size	Wt. Per 100 Ft., Lbs.	W & M Gauge	Net Extra for Size	Wt. Per 100 Ft., Lbs.	W & M Gauge	Net Extra for Size	Wt. Per 100 Ft., Lbs.
3/8	.20	37.60	No. 7	Base	8.36	No. 14	.35	1.71
5/16	.20	26.10	No. 8	"	7.00	No. 15	.55	1.38
1/4	.10	16.70	No. 9	"	5.87	No. 16	.75	1.04
No. 3	.10	15.84	No. 10	.05	4.86	No. 17	1.00	.78
No. 4	.10	13.54	No. 11	.10	3.87	No. 18	1.50	.60
No. 5	.10	11.43	No. 12	.15	2.97	No. 19	2.00	.44
No. 6	Base	9.83	No. 13	.25	2.23	No. 20	2.25	.32

BLACK OIL TEMPERED SPRING WIRE

In Coils

This wire is a specially processed high carbon wire, possessing uniformity of temper, which is obtained through carefully controlled heat treatment.

Thickness Inches	Wt. Per Ft., Lbs.	Approx. Wt. per Coil Lbs.
.220	.441	150 to 180

SOFT GALVANIZED WIRE

Catch Weight Coils

W & M Gauge	W & M Gauge	W & M Gauge	W & M Gauge
No. 3	No. 7	No. 11	No. 15
No. 4	No. 8	No. 12	No. 16
No. 5	No. 9	No. 13	No. 17
No. 6	No. 10	No. 14	No. 18

STONE WIRE—BLACK ANNEALED

12 Lb. Stones

W & M Gauge	Decimal Equivalent	W & M Gauge	Decimal Equivalent	W & M Gauge	Decimal Equivalent
No. 10	(.1350")	No. 16	(.0625")	No. 21	(.032")
No. 11	(.1205")	No. 17	(.0540")	No. 22	(.028")
No. 12	(.1055")	No. 18	(.047")	No. 23	(.025")
No. 13	(.0915")	No. 19	(.041")	No. 24	(.023")
No. 14	(.0800")	No. 20	(.035")	No. 25	(.020")
No. 15	(.0720")				

We straighten and cut wire to order.

HANK TIE WIRE

An extremely soft, uniform, galvanized wire generally used in lathing and plastering work. Paper wrapped, ends burlapped. Stocked in 18 gauge size, 25 lb. hanks. Lengths about 26 inches long.

CARRIAGE BOLTS

Square Nuts—Cut Thread

American Standard—December 1, 1932

Length in Inches	Weight 100 Bolts	List Price 100
3/16		
3/4	1.4	$1.05
7/8	1.5	1.10
1	1.6	1.10
1 1/4	1.7	1.15
1 1/2	2.0	1.20
1 3/4	2.1	1.35
2	2.3	1.35
2 1/4	2.5	1.55
2 1/2	2.7	1.55
3	3.1	1.70
4	3.9	2.30
1/4		
3/4	2.5	1.05
1	2.8	1.10
1 1/4	3.1	1.15
1 1/2	3.4	1.20
1 3/4	3.7	1.35
2	4.0	1.35
2 1/4	4.4	1.55
2 1/2	4.7	1.55
2 3/4	5.0	1.70
3	5.3	1.70
3 1/4	5.6	1.85
3 1/2	5.9	1.85
3 3/4	6.2	2.30
4	6.6	2.30
4 1/4	6.9	2.45
4 1/2	7.2	2.45
5	7.8	2.60
6	9.0	2.90
5/16		
3/4	4.4	1.60
1	4.8	1.65
1 1/4	5.2	1.70
1 1/2	5.7	1.80
1 3/4	6.1	2.00
2	6.6	2.00
2 1/4	7.0	2.25
2 1/2	7.5	2.25
2 3/4	7.9	2.50
3	8.4	2.50
3 1/4	8.9	2.75
3 1/2	9.3	2.75
3 3/4	9.8	2.95
4	10.2	2.95
4 1/2	11.1	3.40
5	12.0	3.60
5 1/2	12.9	3.85
6	13.8	4.05
6 1/2	15.7	4.90
7	16.7	5.15
3/8		
1	6.9	2.10
1 1/4	7.6	2.20
1 1/2	8.3	2.35
1 3/4	9.0	2.60
2	9.7	2.60
2 1/4	10.4	$2.90
2 1/2	11.1	2.90
2 3/4	11.8	3.20
3	12.5	3.20
3 1/4	13.2	3.50
3 1/2	13.9	3.50
3 3/4	14.6	3.80
4	15.3	3.80
4 1/4	16.0	4.10
4 1/2	16.7	4.10
4 3/4	17.4	4.50
5	18.0	4.50
5 1/2	19.4	4.80
6	20.8	5.10
6 1/2	22.2	6.30
7	23.6	6.65
7 1/2	25.0	6.95
8	26.4	7.30
8 1/2	27.8	7.60
9	29.2	7.95
10	32.0	8.60
11	34.8	9.30
12	37.5	10.00
7/16		
1	9.4	3.50
1 1/4	10.4	3.60
1 1/2	11.4	3.75
1 3/4	12.4	4.05
2	13.3	4.05
2 1/4	14.3	4.40
2 1/2	15.3	4.40
2 3/4	16.3	4.75
3	17.3	4.75
3 1/4	18.3	5.10
3 1/2	19.3	5.10
3 3/4	20.3	5.40
4	21.3	5.40
4 1/4	22.3	5.75
4 1/2	23.3	5.75
4 3/4	24.3	6.10
5	25.3	6.10
6	29.3	6.80
6 1/2	31.2	8.25
7	33.2	8.70
8	37.2	9.60
10	45.1	11.40
1/2		
1	14.5	4.25
1 1/4	15.9	4.40
1 1/2	17.3	4.60
1 3/4	18.6	4.95
2	20.0	4.95
2 1/4	21.4	5.35
2 1/2	22.8	5.35
2 3/4	24.2	5.75
3	25.5	5.75
3 1/4	26.9	6.15
3 1/2	28.3	6.15
3 3/4	29.7	$6.55
4	31.0	6.55
4 1/4	32.4	6.95
4 1/2	33.8	6.95
4 3/4	35.2	7.35
5	36.5	7.35
5 1/2	39.3	7.80
6	42.0	8.20
6 1/2	44.8	9.75
7	47.5	10.20
7 1/2	50.3	10.65
8	53.0	10.65
8 1/2	55.8	12.05
9	58.5	12.50
9 1/2	61.3	12.95
10	64.0	13.40
11	69.5	14.30
12	75.0	15.20
13	77.4	16.10
14	82.9	17.00
15	88.0	17.90
16	93.2	18.80
5/8		
1 1/2	32.0	8.60
2	36.0	9.10
2 1/2	40.0	9.60
3	44.0	10.10
3 1/2	48.0	10.60
4	52.0	11.10
4 1/2	56.0	11.60
5	60.0	12.10
5 1/2	64.0	12.60
6	68.0	13.10
6 1/2	72.0	13.60
7	76.0	14.10
8	84.0	15.10
9	92.0	16.10
10	100.0	17.10
12	116.0	19.10
14	132.0	21.10
16	148.0	23.10
3/4		
2	54.0	13.10
2 1/2	60.0	13.75
3	66.0	14.40
3 1/2	72.0	15.05
4	78.0	15.70
4 1/2	84.0	16.35
5	90.0	17.00
5 1/2	96.0	17.65
6	102.0	18.30
7	114.0	19.60
8	126.0	20.90
9	138.0	22.20
10	150.0	23.50
12	174.0	26.10
14	199.0	28.70
16	223.0	31.30
18	247.0	33.90

Intermediate lengths take next higher list. Bolts with other than American Standard square heads, standard extras; other than American Standard square nuts and with two nuts, standard extras. Larger diameters, price quoted on receipt of specifications. Lengths of threads furnished without extra charge. Gross extras for special threading. We can also furnish these with Hexagon Nuts at standard extras.

For contents of paper packages, see page 220.

STAINLESS STEEL BOLTS

See Stainless Steel Section

COUPLING BOLTS, MILLED IRON STUDS

Standard Sizes Furnished Promptly

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MACHINE BOLTS

Hexagon Heads and Hexagon Nuts

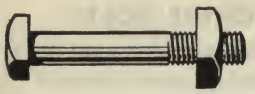
Cut Thread—American Standard

Length in Inches	List Price 100
1/4x 3/4	$1.35
1	1.40
1 1/4	1.50
1 1/2	1.55
1 3/4	1.75
2	1.75
2 1/4	1.95
2 1/2	1.95
2 3/4	2.10
3	2.10
3 1/2	2.30
4	2.75
4 1/2	2.90
5	3.05
5/16x 3/4	2.10
1	2.15
1 1/4	2.20
1 1/2	2.35
1 3/4	2.60
2	2.60
2 1/4	2.85
2 1/2	2.85
2 3/4	3.10
3	3.10
3 1/4	3.35
3 1/2	3.35
4	3.55
4 1/2	4.00
5	4.20
5 1/2	N.Y.
6	4.60
3/8x 3/4	2.85
7/8	2.85
1	2.95
1 1/4	3.05
1 1/2	3.20
1 3/4	3.50
2	3.50
2 1/4	3.80
2 1/2	3.80
2 3/4	4.10
3	4.10
3 1/4	4.40
3 1/2	4.40
3 3/4	4.70
4	4.70
4 1/4	5.00
4 1/2	5.00
4 3/4	5.40
5	5.40
5 1/4	5.70
5 1/2	5.70
6	6.00

Length in Inches	List Price 100
3/8x6 1/2	$7.10
7	7.45
7 1/2	7.75
8	8.10
8 1/2	8.40
9	8.75
10	9.40
11	10.10
12	10.80
7/16x1	4.85
1 1/4	5.00
1 1/2	5.15
1 3/4	5.45
2	5.45
2 1/4	5.75
2 1/2	5.75
2 3/4	6.10
3	6.10
3 1/4	6.40
3 1/2	6.40
4	6.75
4 1/2	7.05
5	7.40
5 1/2	7.75
6	8.05
7	10.55
7 1/2	11.00
8	11.45
1/2x1	5.75
1 1/4	5.95
1 1/2	6.15
1 3/4	6.50
2	6.50
2 1/4	6.90
2 1/2	6.90
2 3/4	7.30
3	7.30
3 1/4	7.65
3 1/2	7.65
3 3/4	8.00
4	8.00
4 1/4	8.40
4 1/2	8.40
4 3/4	8.80
5	8.80
5 1/4	9.20
5 1/2	9.20
6	9.60
6 1/2	11.30
7	11.75
7 1/2	12.20
8	12.65
8 1/2	13.10

Length in Inches	List Price 100
1/2x9	$13.55
9 1/2	14.00
10	14.45
10 1/2	15.85
11	15.85
11 1/2	16.75
12	16.75
5/8x1	10.00
1 1/4	10.25
1 1/2	10.50
1 3/4	11.00
2	11.00
2 1/4	11.50
2 1/2	11.50
2 3/4	12.00
3	12.00
3 1/4	12.50
3 1/2	12.50
3 3/4	13.00
4	13.00
4 1/4	13.50
4 1/2	13.50
4 3/4	14.00
5	14.00
5 1/4	14.50
5 1/2	14.50
5 3/4	15.00
6	15.00
6 1/2	15.50
7	16.00
7 1/2	16.50
8	17.00
8 1/2	17.50
9	18.00
9 1/2	18.50
10	19.00
11	20.00
12	21.00
3/4x1	13.65
1 1/4	13.65
1 1/2	13.65
1 3/4	14.30
2	14.30
2 1/4	14.95
2 1/2	14.95
2 3/4	15.60
3	15.60
3 1/4	16.25
3 1/2	16.25
3 3/4	16.90
4	16.90
4 1/4	17.55
4 1/2	17.55

Length in Inches	List Price 100
3/4x4 3/4	$18.20
5	18.20
5 1/4	18.85
5 1/2	18.85
5 3/4	19.50
6	19.50
6 1/2	20.15
7	20.80
7 1/2	21.45
8	22.10
8 1/2	22.75
9	23.40
9 1/2	24.05
10	24.70
10 1/2	26.00
11	26.00
12	27.30
7/8x1 3/4	21.80
2	21.80
2 1/4	22.70
2 1/2	22.70
2 3/4	23.60
3	23.60
3 1/4	24.50
3 1/2	24.50
3 3/4	25.40
4	25.40
4 1/4	26.30
4 1/2	26.30
4 3/4	27.20
5	27.20
5 1/2	28.10
6	29.00
7	30.80
8	32.60
9	34.40
10	36.20
11	38.00
12	39.80
1x2	N.Y.
2 1/2	N.Y.
3	32.60
3 1/4	33.75
3 1/2	33.75
4	34.90
4 1/2	36.05
5	37.20
5 1/2	38.35
6	39.50
7	41.80
8	44.10
9	46.40
10	48.70
11	51.00
12	53.30



MACHINE BOLTS

Square Heads and Square Nuts

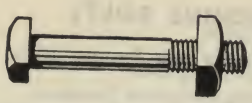
Cut Thread—American Standard

Length in Inches	Wt. 100 Bolts	List Price 100
1/4		
1/2	2.6	$1.10
3/4	2.9	1.10
1	3.2	1.15
1 1/4	3.5	1.25
1 1/2	3.7	1.30
1 3/4	3.9	1.50
2	4.2	1.50
2 1/4	4.5	1.70
2 1/2	4.8	1.70
2 3/4	5.2	1.85
3	5.5	1.85
3 1/2	6.0	2.05
4	6.6	2.50
5	7.8	2.80
6	9.4	3.10
7	10.7	4.00
5/16		
3/4	4.5	1.70
1	5.0	1.75
1 1/4	5.5	1.80
1 1/2	6.0	1.95
1 3/4	6.5	2.20
2	7.0	2.20
2 1/4	7.5	2.45
2 1/2	8.0	2.45
2 3/4	8.5	2.70
3	9.0	2.70
3 1/4	9.5	2.95
3 1/2	10.0	2.95
4	11.0	3.15
4 1/2	12.0	3.60
5	13.0	3.80
6	15.1	4.20
7	17.1	5.35
8	19.1	5.80
3/8		
3/4	6.8	2.25
7/8	7.1	2.35
1	7.5	2.35
1 1/4	8.3	2.45
1 1/2	9.0	2.60
1 3/4	9.8	2.90
2	10.5	2.90
2 1/4	11.3	3.20
2 1/2	12.0	3.20
2 3/4	12.8	3.50
3	13.5	3.50
3 1/4	14.3	3.80
3 1/2	15.0	3.80
3 3/4	15.8	4.10
4	16.5	4.10
4 1/4	17.3	4.40
4 1/2	18.0	4.40
4 3/4	18.8	4.80
5	19.5	4.80
5 1/4	20.3	5.10
5 1/2	21.0	5.10
6	21.6	5.40
6 1/2	23.0	6.50
7	24.4	6.85
7 1/2	25.8	7.15
8	27.2	7.50
8 1/2	28.6	7.80
9	30.0	8.15
10	32.8	8.80
11	35.6	9.50
12	38.4	10.20
13	41.2	11.30
14	44.0	11.95
7/16		
1	13.2	3.95
1 1/4	14.2	4.10
1 1/2	15.2	4.25
1 3/4	16.2	4.55
7/16		
2	17.2	$4.55
2 1/4	18.2	4.85
2 1/2	19.2	4.85
2 3/4	20.2	5.20
3	21.2	5.20
3 1/4	22.2	5.50
3 1/2	23.2	5.50
4	25.2	5.85
4 1/2	27.2	6.15
5	29.2	6.50
5 1/2	31.2	6.85
6	33.2	7.15
7	37.2	9.65
7 1/2	39.2	10.10
8	41.2	10.55
1/2		
3/4	14.5	4.60
1	17.0	4.60
1 1/4	18.3	4.80
1 1/2	19.6	5.00
1 3/4	20.9	5.35
2	22.2	5.35
2 1/4	23.5	5.75
2 1/2	24.8	5.75
2 3/4	26.1	6.15
3	27.5	6.15
3 1/4	28.8	6.50
3 1/2	30.1	6.50
3 3/4	31.5	6.85
4	32.8	6.85
4 1/4	34.1	7.25
4 1/2	35.4	7.25
4 3/4	36.8	7.65
5	38.1	7.65
5 1/4	39.4	8.05
5 1/2	40.7	8.05
6	43.4	8.45
6 1/2	46.0	10.15
7	48.7	10.60
7 1/2	51.3	11.05
8	54.0	11.50
8 1/2	56.8	11.95
9	59.5	12.40
9 1/2	62.3	12.85
10	65.0	13.30
10 1/2	67.8	14.70
11	70.5	14.70
11 1/2	73.3	15.60
12	76.0	15.60
12 1/2	78.5	16.50
13	81.5	16.50
14	87.0	17.40
15	92.5	18.30
16	98.0	19.20
17	103.5	20.10
18	109.0	21.00
19	114.5	21.90
20	120.0	22.80
21	125.5	23.70
22	131.0	24.60
23	136.5	25.50
24	142.0	26.40
5/8		
1	30.2	8.10
1 1/4	32.3	8.35
1 1/2	34.3	8.60
1 3/4	36.4	9.10
2	38.4	9.10
2 1/4	40.5	9.60
2 1/2	42.5	9.60
2 3/4	44.6	10.10
3	46.7	10.10
3 1/4	48.8	10.60
3 1/2	50.8	10.60
5/8		
3 3/4	52.9	$11.10
4	55.0	11.10
4 1/4	57.2	11.60
4 1/2	59.1	11.60
4 3/4	61.4	12.10
5	63.3	12.10
5 1/4	65.5	12.60
5 1/2	67.4	12.60
5 3/4	69.6	13.10
6	71.6	13.10
6 1/2	75.7	13.60
7	79.9	14.10
7 1/2	84.0	14.60
8	88.2	15.10
8 1/2	92.4	15.60
9	96.5	16.10
9 1/2	100.6	16.60
10	104.8	17.10
11	113.1	18.10
12	121.4	19.10
13	129.7	20.10
14	138.0	21.10
15	146.3	22.10
16	154.6	23.10
17	162.9	24.10
18	171.2	25.10
19	179.5	26.10
20	187.8	27.10
21	196.0	28.10
22	204.4	29.10
24	221.0	31.10
26	237.6	33.10
28	254.2	35.10
30	270.8	37.10
3/4		
1	48.5	10.95
1 1/4	51.4	10.95
1 1/2	54.3	10.95
1 3/4	57.2	11.60
2	60.0	11.60
2 1/4	62.9	12.25
2 1/2	65.7	12.25
2 3/4	68.6	12.90
3	71.4	12.90
3 1/4	74.3	13.55
3 1/2	77.1	13.55
3 3/4	80.0	14.20
4	82.8	14.20
4 1/4	85.9	14.85
4 1/2	88.9	14.85
4 3/4	92.0	15.50
5	95.0	15.50
5 1/4	98.0	16.15
5 1/2	101.1	16.15
5 3/4	104.2	16.80
6	107.2	16.80
6 1/2	113.3	17.45
7	119.4	18.10
7 1/2	125.5	18.75
8	131.6	19.40
8 1/2	137.7	20.05
9	143.8	20.70
9 1/2	149.9	21.35
10	156.0	22.00
10 1/2	162.1	23.33
11	168.2	23.30
12	180.4	24.60
12 1/2	186.5	25.90
13	192.6	25.90
13 1/2	198.6	27.20
14	204.8	27.20
14 1/2	210.9	28.50

(Continued)

For contents of paper packages, see page 220.

Data 243



MACHINE BOLTS

Square Heads and Square Nuts

Cut Thread—American Standard

Length in Inches	Wt. 100 Bolts	List Price 100
(Continued)		
3/4		
15	217.0	$28.50
16	229.2	29.80
17	238.2	31.10
18	253.6	32.40
19	265.8	33.70
20	278.0	35.00
21	290.4	36.30
22	302.8	37.60
23	315.2	38.90
24	327.6	40.20
26	352.4	42.80
28	377.2	45.40
30	402.0	48.00
7/8		
1½	72.9	16.70
1¾	86.7	17.60
2	90.8	17.60
2¼	95.0	18.50
2½	99.1	18.50
2¾	103.3	19.40
3	107.4	19.40
3¼	111.6	20.30
3½	115.7	20.30
3¾	119.9	21.20
4	124.0	21.20
4¼	128.2	22.10
4½	132.3	22.10
4¾	136.4	23.00
5	140.6	23.00
5½	148.9	23.90
6	157.2	24.80
7	173.8	26.60
8	190.4	28.40
9	207.0	30.20
10	223.6	32.00
11	240.2	33.80
12	256.8	35.00
7/8		
13	273.4	$37.40
14	290.0	39.20
15	306.6	41.00
16	323.2	42.80
17	339.8	44.60
18	356.4	46.40
19	373.0	48.20
20	389.6	50.00
21	407.8	51.80
22	423.4	53.60
24	457.2	57.20
26	491.0	60.80
28	524.8	64.40
30	558.6	68.00
1		
2	140.8	24.40
2¼ N.Y.	146.3	25.55
2½	151.6	25.55
3	159.0	26.70
3½	169.8	27.85
4	180.6	29.00
4½	191.4	30.15
5	202.2	31.30
5½	213.0	32.45
6	223.8	33.60
6½	238.0	34.75
7	245.4	35.90
7½	248.8	37.05
8	267.0	38.20
8½	281.2	39.35
9	288.6	40.50
9½	302.8	41.65
10	310.2	42.80
11	331.8	45.10
12	353.4	47.40
13	378.4	49.70
14	396.6	52.00
15	421.6	54.30
1		
16	439.8	$56.60
17	464.8	58.90
18	483.0	61.20
19	504.6	63.50
20	526.2	65.80
22	570.2	70.40
24	614.2	75.00
26	658.2	79.60
28	702.2	84.20
30	746.2	88.80
32	788.8	....
34	832.0	....
36	875.2	....
1-1/8		
4	237.6	48.50
4½	251.4	49.80
5	265.2	51.10
5½	279.0	52.40
6	292.8	53.70
7	320.4	56.30
8	348.0	58.90
9	375.6	61.50
10	403.2	64.10
12	458.4	69.30
14	513.6	74.15
16	568.8	79.70
1-1/4		
4	319.1	57.75
4½	335.6	59.40
5	352.2	61.05
5½	368.7	62.70
6	385.3	64.35
7	418.4	67.65
8	451.5	70.95
9	484.6	74.25
10	517.7	77.55
12	583.0	84.15
14	650.1	90.75
16	716.3	97.35

Intermediate lengths take next higher list. Bolts with other than American Standard square heads, standard extras; other than American Standard square nuts and with two nuts, standard extras. Standard lengths of threads furnished without extra charge. Special lengths of threads subject to standard extras. We can also furnish these with Hexagon Nuts at standard extras.

MACHINE BOLTS—COUNTERSUNK HEAD

Slotted Head—Hexagon Nuts

Shipped from our New York Plant

Length in Inches	List Price 100	Length in Inches	List Price 100	Length in Inches	List Price 100	Length in Inches	List Price 100
3/8x1	$4.35	1/2x1½	9.25	5/8x1¾	15.50	3/4x2	21.15
1¼	4.45	1¾	9.60	2	15.50	2½	21.80
1½	4.60	2½	10.00	3	16.50	3	22.45
1/2x1	8.85	5/8x ¼	14.75	3/4x1½	20.50	3½	23.10
1¼	9.05	1½	15.00	1¾	21.15	4	23.75

MACHINE BOLTS—GALVANIZED

Hexagon Heads and Hexagon Nuts

Shipped from our New York Plant

Length in Inches	List Price 100	Length in Inches	List Price 100	Length in Inches	List Price 100	Length in Inches	List Price 100
1/4x4	$3.55	3/8x2½	$3.80	1/2x1½	$6.15	1/2x3½	$7.65
3/8x1	2.95	3	4.10	2	6.50	5/8x1½	10.50
1¼	3.05	1/2x1	5.75	2½	6.90	3	12.00
2	3.50	1¼	5.95	3	7.30	3/4x1½	13.65

STOVE BOLTS

Round and Flat Head

Size Inches	List Price 100	Approx. Wt. 100 Pieces Round Head	Approx. Wt. 100 Pieces Flat Head
3/16x 3/8	$0.67	.86	.78
1/2	.70	.94	.85
5/8	.73	1.02	.93
3/4	.76	1.10	1.01
1	.83	1.26	1.17
1 1/4	.90	1.42	1.33
1 1/2	1.01	1.57	1.49
1 3/4	1.12	1.73	1.64
2	1.27	1.89	1.80
2 1/2	1.59	2.21	2.12
3	1.95	2.52	2.43
1/4x 3/8	1.12	1.72	1.60
1/2	1.12	1.85	1.72
5/8	1.18	1.97	1.84
3/4	1.25	2.09	1.97
7/8	1.31	2.21	2.09
1	1.38	2.34	2.21
1 1/4	1.51	2.58	2.46
1 1/2	1.64	2.83	2.70
1 3/4	1.80	3.07	2.95
2	1.98	3.32	3.19
2 1/4	2.16	3.56	3.44
2 1/2	2.34	3.81	3.68
3	2.75	4.30	4.17
3 1/2	3.10	4.79	4.66
4	3.45	5.28	5.15
4 1/2	3.80	5.77	5.64
5	4.15	6.26	6.13

Size Inches	List Price 100	Approx. Wt. 100 Pieces Round Head	Approx. Wt. 100 Pieces Flat Head
5/16x 1/2	$2.12	3.16	2,81
3/4	2.12	3.57	3.22
1	2.27	3.98	3.63
1 1/4	2.41	4.39	4.04
1 1/2	2.59	4.80	4.45
1 3/4	2.77	5.21	4.86
2	3.00	5.62	5.27
2 1/4	3.20	6.03	5.68
2 1/2	3.45	6.44	6.09
2 3/4	3.70	6.85	6.50
3	3.95	7.26	6.91
3 1/2	4.40	8.08	7.73
4	4.85	8.90	8.55
3/8x 3/4	2.90	4.94	4.44
1	3.10	5.53	5.03
1 1/4	3.30	6.12	5.62
1 1/2	3.50	6.71	6.21
1 3/4	3.75	7.31	6.81
2	4.00	7.90	7.40
2 1/4	4.25	8.49	7.99
2 1/2	4.55	9.08	8.58
3	5.20	10.27	9.77
3 1/2	5.80	11.45	10.95
4	6.40	12.63	12.13
1/2x1	8.80	12.60	11.70
1 1/2	9.60	14.76	13.86
2	10.50	16.92	16.02
2 1/2	11.70	19.08	18.18
3	13.00	21.24	20.34

COACH AND LAG SCREWS

With Square Heads and Gimlet Points

Manufacturers' Standard List

Size in In.	Wt. per 100	List Price 100
1/4x		
1	1.6	$2.35
1 1/4	1.8	2.35
1 1/2	2.1	2.15
1 3/4	2.4	2.35
2	2.7	2.35
2 1/4	3.0	2.55
2 1/2	3.3	2.55
2 3/4	3.6	2.80
3	3.8	2.80
5/16x		
1	3.1	2.35
1 1/2	3.5	2.15
2	4.4	2.35
2 1/2	5.3	2.55
3	6.2	2.80
3 1/2	7.1	3.05
4	8.0	3.30
5	10.0	3.80
3/8x		
1 1/2	5.8	2.60
2	7.1	2.85
2 1/2	8.5	3.10
3	9.8	3.40
3 1/2	11.1	3.70
4	12.5	4.00

Size in In.	Wt. per 100	List Price 100
3/8x		
4 1/2	13.8	$4.30
5	14.9	4.65
5 1/2	16.0	5.00
6	17.2	5.35
7	20.0	6.05
8	22.8	6.75
1/2x		
2	15.0	4.45
2 1/2	17.3	4.85
3	19.5	5.30
3 1/2	21.6	5.75
4	23.8	6.20
4 1/2	26.3	6.65
5	28.8	7.10
5 1/2	31.3	7.55
6	33.8	8.00
6 1/2	36.4	8.45
7	38.9	8.90
8	44.0	9.80
9	48.5	10.70
10	53.0	11.60
5/8x		
2	26.3	7.40
2 1/2	29.9	6.85
3	33.5	7.50

Size in In.	Wt. per 100	List Price 100
5/8x		
3 1/2	37.1	$8.15
4	40.7	8.80
4 1/2	44.5	9.45
5	48.3	10.10
6	55.7	11.40
7	63.2	12.70
8	69.3	14.00
9	76.4	15.20
10	83.5	16.40
3/4x		
2	34.7	11.75
2 1/2	39.8	11.00
3	45.0	11.90
3 1/2	50.3	12.80
4	57.1	13.70
4 1/2	62.9	14.60
5	68.8	15.50
5 1/2	74.7	16.40
6	80.5	17.30
7	92.3	19.10
8	104.0	20.90
9	115.4	22.65
10	126.8	24.40
12	149.5	28.10
14	161.5	31.85

Data 243

DARDELET SELF-LOCKING "RIVET BOLTS"

A. B. A. Standard Button Heads and Hexagon Nuts

Shipped from our New York Plant

"Rivet-Bolt" Diameter			3/8			1/2		
Hole-Size			7/16			9/16		
Thickness of work	Grip No.	G	Lgth. Inches	Wt. Per 100	List Price Per 100	Lgth. Inches	Wt. Per 100	List Price Per 100
3/8 to 1/2	1	15/32	1 1/8	10.8	$ 9.63	1 1/4	20.7	$13.73
9/16 to 11/16	2	21/32	1 5/16	11.2	9.83	1 7/16	21.7	14.20
3/4 to 7/8	3	27/32	1 1/2	11.6	10.03	1 5/8	22.8	14.63
15/16 to 1 1/16	4	1 3/32	1 11/16	12.0	10.23	1 13/16	23.8	15.10
1 1/8 to 1 1/4	5	1 7/32	1 7/8	12.4	10.43	2	24.9	15.57
1 5/16 to 1 7/16	6	1 13/32	2 1/16	12.8	10.63	2 1/16	26.5	16.00
1 1/2 to 1 5/8	7	1 19/32	2 1/4	13.6	10.83	2 3/8	27.5	16.47
1 11/16 to 1 13/16	8	1 25/32	...	...	....	2 5/16	28.6	16.90
1 7/8 to 2	9	1 31/32	...	...	....	2 3/4	29.2	17.37

"River-Bolt" Diameter			5/8			3/4		
Hole-Size			11/16			13/16		
Thickness of work	Grip No.	G	Lgth. Inches	Wt. Per 100	List Price Per 100	Lgth. Inches	Wt. Per 100	List Price Per 100
3/8 to 1/2	1	15/32	1 3/8	36.6	$20.33	1 1/2	58.8	$27.47
9/16 to 11/16	2	21/32	1 5/8	38.2	20.83	1 11/16	61.1	28.03
3/4 to 7/8	3	27/32	1 3/4	39.9	21.33	1 7/8	63.4	28.57
15/16 to 1 1/16	4	1 3/32	1 15/16	41.5	21.83	2 1/16	65.7	29.17
1 1/8 to 1 1/4	5	1 7/32	2 1/8	43.2	22.33	2 1/4	68.0	29.67
1 5/16 to 1 7/16	6	1 13/32	2 5/16	44.8	22.83	2 7/16	70.3	30.30
1 1/2 to 1 5/8	7	1 19/32	2 1/2	46.4	23.33	2 5/8	72.6	30.77
1 11/16 to 1 13/16	8	1 25/32	2 11/16	48.1	23.80	2 13/16	74.9	31.33
1 7/8 to 2	9	1 31/32	2 7/8	49.8	24.30	3	77.2	31.90
2 1/16 to 2 3/16	10	2 5/32	3 1/16	51.4	24.80	3 3/16	79.4	32.47
2 1/4 to 2 3/8	11	2 11/32	3 1/4	53.0	25.30	3 3/8	81.7	33.00
2 7/16 to 2 9/16	12	2 17/32	...	...	....	3 5/16	83.9	33.57
2 5/8 to 2 3/4	13	2 23/32	...	...	....	3 3/4	86.2	34.13
2 13/16 to 2 15/16	14	2 29/32	...	...	....	3 15/16	88.4	34.73

"River-Bolt" Diameter			7/8			1		
Hole Size			15/16			1-1/16		
Thickness of work	Grip No.	G	Lgth. Inches	Wt. Per 100	List Price Per 100	Lgth. Inches	Wt. Per 100	List Price Per 100
3/8 to 1/2	1	15/32	1 11/16	89.	$36.57	...	...	....
9/16 to 11/16	2	21/32	1 7/8	92.	37.50	...	...	....
3/4 to 7/8	3	27/32	2 1/16	95.	38.47	2 1/16	132.7	$53.53
15/16 to 1 1/16	4	1 3/32	2 1/4	98.	39.40	2 3/8	136.4	54.53
1 1/8 to 1 1/4	5	1 7/32	2 7/16	101.	40.37	2 9/16	140.2	55.53
1 5/16 to 1 7/16	6	1 13/32	2 5/8	104.	41.33	2 3/4	143.9	56.53
1 1/2 to 1 5/8	7	1 19/32	2 13/16	107.	42.27	2 15/16	147.7	57.53
1 11/16 to 1 13/16	8	1 25/32	3	110.	43.23	3 1/16	151.4	58.53
1 7/8 to 2	9	1 31/32	3 3/16	113.	44.17	3 5/16	155.2	59.53
2 1/16 to 2 3/16	10	2 5/32	3 3/8	116.	45.13	3 1/2	158.9	60.53
2 1/4 to 2 3/8	11	2 11/32	3 9/16	119.	46.07	3 11/16	162.7	61.53
2 7/16 to 2 9/16	12	2 17/32	3 3/4	122.	47.03	3 7/8	166.4	62.53
2 5/8 to 2 3/4	13	2 23/32	3 15/16	125.	47.97	4 1/16	170.2	63.53
2 13/16 to 2 15/16	14	2 29/32	4 1/8	128.	48.93	4 1/4	173.9	64.53
3 to 3 1/8	15	3 3/32	4 5/16	131.	49.90	4 7/16	177.7	65.53
3 3/16 to 3 5/16	16	3 11/32	4 1/2	134.	50.83	4 5/8	181.4	66.53
3 3/8 to 3 1/2	17	3 15/32	4 11/16	137.	51.80	4 13/16	185.2	67.53
3 9/16 to 3 11/16	18	3 19/32	4 7/8	140.	52.73	5	188.9	68.53
3 3/4 to 3 7/8	19	3 27/32	5 1/16	143.	53.70	5 1/8	192.7	69.53
3 15/16 to 4 1/16	20	4 3/32	5 1/4	146.	54.63	5 3/8	196.4	70.53

Dia. of Bolt	3/8"	1/2"	5/8"	3/4"	7/8"	1"
Length of Thread	19/32	23/32	27/32	31/32	1 5/32	1 9/32
Thickness of Nut	7/16	1/2	9/16	11/16	1 1/8	1 1/4
Nut, Across Flats	7/8	1 1/16	1 1/4	1 7/16	1 5/8	1 13/16

S. A. E. STANDARD SPECIFICATIONS

Revised January 1935

CARBON STEELS

S.A.E. No.	Carbon Range	Manganese Range	Phosphorus Max.	Sulphur Max.
1010	0.05 to 0.15	0.30 to 0.60	0.045	0.055
1015	0.10 to 0.20	0.30 to 0.60	0.045	0.055
x1015	0.10 to 0.20	0.70 to 1.00	0.045	0.055
1020	0.15 to 0.25	0.30 to 0.60	0.045	0.055
x1020	0.15 to 0.25	0.70 to 1.00	0.045	0.055
1025	0.20 to 0.30	0.30 to 0.60	0.045	0.055
x1025	0.20 to 0.30	0.70 to 1.00	0.045	0.055
1030	0.25 to 0.35	0.60 to 0.90	0.045	0.055
1035	0.30 to 0.40	0.60 to 0.90	0.045	0.055
1040	0.35 to 0.45	0.60 to 0.90	0.045	0.055
x1040	0.35 to 0.45	0.40 to 0.70	0.045	0.055
1045	0.40 to 0.50	0.60 to 0.90	0.045	0.055
x1045	0.40 to 0.50	0.40 to 0.70	0.045	0.055
1050	0.45 to 0.55	0.60 to 0.90	0.045	0.055
x1050	0.45 to 0.55	0.40 to 0.70	0.045	0.055
1055	0.50 to 0.60	0.60 to 0.90	0.040	0.055
x1055	0.50 to 0.60	0.90 to 1.20	0.040	0.055
1060	0.55 to 0.70	0.60 to 0.90	0.040	0.055
1065	0.60 to 0.75	0.60 to 0.90	0.040	0.055
x1065	0.60 to 0.75	0.90 to 1.20	0.040	0.055
1070	0.65 to 0.80	0.60 to 0.90	0.040	0.055
1075	0.70 to 0.85	0.60 to 0.90	0.040	0.055
1080	0.75 to 0.90	0.60 to 0.90	0.040	0.055
1085	0.80 to 0.95	0.60 to 0.90	0.040	0.055
1090	0.85 to 1.00	0.60 to 0.90	0.040	0.055
1095	0.90 to 1.05	0.25 to 0.50	0.040	0.055

FREE CUTTING STEELS—(Screw Steels)

S.A.E. No.	Carbon Range	Manganese Range	Phosphorus Range	Sulphur Range
1112	0.08 to 0.16	0.60 to 0.90	0.09 to 0.13	0.10 to 0.20
x1112	0.08 to 0.16	0.60 to 0.90	0.09 to 0.13	0.20 to 0.30
1115	0.10 to 0.20	0.70 to 1.00	0.045 Max.	0.075 to 0.15
1120	0.15 to 0.25	0.60 to 0.90	0.045 Max.	0.075 to 0.15
x1314	0.10 to 0.20	1.00 to 1.30	0.045 Max.	0.075 to 0.15
x1315	0.10 to 0.20	1.30 to 1.60	0.045 Max.	0.075 to 0.15
x1330	0.25 to 0.35	1.35 to 1.65	0.045 Max.	0.075 to 0.15
x1335	0.30 to 0.40	1.35 to 1.65	0.045 Max.	0.075 to 0.15
x1340	0.35 to 0.45	1.35 to 1.65	0.045 Max.	0.075 to 0.15

MANGANESE STEELS

For silicon range see foot note

S.A.E. No.	Carbon Range	Manganese Range	Phosphorus Max.	Sulphur Max.
T1330	0.25 to 0.35	1.60 to 1.90	0.040	0.050
T1335	0.30 to 0.40	1.60 to 1.90	0.040	0.050
T1340	0.35 to 0.45	1.60 to 1.90	0.040	0.050
T1345	0.40 to 0.50	1.60 to 1.90	0.040	0.050
T1350	0.45 to 0.55	1.60 to 1.90	0.040	0.050

Silicon range of all S.A.E. basic open hearth alloy steels shall be 0.15-0.30. For electric and acid open hearth alloy steels, the silicon content shall be a minimum of 0.15.

Av. Physical Prop. Table 246

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S. A. E. STANDARD SPECIFICATIONS

Revised January 1935

NICKEL STEELS

For silicon range see foot note

S.A.E No.	Carbon Range	Manganese Range	Phos-phorus Max.	Sul-phur Max.	Nickel Range
2015	0.10 to 0.20	0.30 to 0.60	0.04	0.05	0.40 to 0.60
2115	0.10 to 0.20	0.30 to 0.60	0.04	0.05	1.25 to 1.75
2315	0.10 to 0.20	0.30 to 0.60	0.04	0.05	3.25 to 3.75
2320	0.15 to 0.25	0.30 to 0.60	0.04	0.05	3.25 to 3.75
2330	0.25 to 0.35	0.50 to 0.80	0.04	0.05	3.25 to 3.75
2335	0.30 to 0.40	0.50 to 0.80	0.04	0.05	3.25 to 3.75
2340	0.35 to 0.45	0.60 to 0.90	0.04	0.05	3.25 to 3.75
2345	0.40 to 0.50	0.60 to 0.90	0.04	0.05	3.25 to 3.75
2350	0.45 to 0.55	0.60 to 0.90	0.04	0.05	3.25 to 3.75
2515	0.10 to 0.20	0.30 to 0.60	0.04	0.05	4.75 to 5.25

NICKEL-CHROMIUM STEELS

For silicon range see foot note

S.A.E. No.	Carbon Range	Manganese Range	Phos. Max.	Sulph. Max.	Nickel Range	Chromium Range
3115	0.10 to 0.20	0.30 to 0.60	0.04	0.050	1.00 to 1.50	0.45 to 0.75
3120	0.15 to 0.25	0.30 to 0.60	0.04	0.050	1.00 to 1.50	0.45 to 0.75
3125	0.20 to 0.30	0.50 to 0.80	0.04	0.050	1.00 to 1.50	0.45 to 0.75
3130	0.25 to 0.35	0.50 to 0.80	0.04	0.050	1.00 to 1.50	0.45 to 0.75
3135	0.30 to 0.40	0.50 to 0.80	0.04	0.050	1.00 to 1.50	0.45 to 0.75
3140	0.35 to 0.45	0.60 to 0.90	0.04	0.050	1.00 to 1.50	0.45 to 0.75
x3140	0.35 to 0.45	0.60 to 0.90	0.04	0.050	1.00 to 1.50	0.60 to 0.90
3145	0.40 to 0.50	0.60 to 0.90	0.04	0.050	1.00 to 1.50	0.45 to 0.75
3150	0.45 to 0.55	0.60 to 0.90	0.04	0.050	1.00 to 1.50	0.45 to 0.75
3215	0.10 to 0.20	0.30 to 0.60	0.04	0.050	1.50 to 2.00	0.90 to 1.25
3220	0.15 to 0.25	0.30 to 0.60	0.04	0.050	1.50 to 2.00	0.90 to 1.25
3230	0.25 to 0.35	0.30 to 0.60	0.04	0.050	1.50 to 2.00	0.90 to 1.25
3240	0.35 to 0.45	0.30 to 0.60	0.04	0.050	1.50 to 2.00	0.90 to 1.25
3245	0.40 to 0.50	0.30 to 0.60	0.04	0.050	1.50 to 2.00	0.90 to 1.25
3250	0.45 to 0.55	0.30 to 0.60	0.04	0.050	1.50 to 2.00	0.90 to 1.25
3312	Max. 0.17	0.30 to 0.60	0.04	0.050	3.25 to 3.75	1.25 to 1.75
3325	0.20 to 0.30	0.30 to 0.60	0.04	0.050	3.25 to 3.75	1.25 to 1.75
3335	0.30 to 0.40	0.30 to 0.60	0.04	0.050	3.25 to 3.75	1.25 to 1.75
3340	0.35 to 0.45	0.30 to 0.60	0.04	0.050	3.25 to 3.75	1.25 to 1.75
3415	0.10 to 0.20	0.30 to 0.60	0.04	0.050	2.75 to 3.25	0.60 to 0.95
3435	0.30 to 0.40	0.30 to 0.60	0.04	0.050	2.75 to 3.25	0.60 to 0.95
3450	0.45 to 0.55	0.30 to 0.60	0.04	0.050	2.75 to 3.25	0.60 to 0.95

MOLYBDENUM STEELS

For silicon range see foot note

S.A.E. No.	Carbon Range	Manganese Range	Phos-phorus Max.	Sul-phur Max.	Chrom-ium Range	Nickel Range	Molyb-denum Range
4130	0.25 to 0.35	0.50 to 0.80	0.040	0.050	0.50 to 0.80	.....	0.15 to 0.25
x4130	0.25 to 0.35	0.40 to 0.60	0.040	0.050	0.80 to 1.10	.....	0.15 to 0.25
4135	0.30 to 0.40	0.60 to 0.90	0.040	0.050	0.80 to 1.10	.....	0.15 to 0.25
4140	0.35 to 0.45	0.60 to 0.90	0.040	0.050	0.80 to 1.10	.....	0.15 to 0.25
4150	0.45 to 0.55	0.60 to 0.90	0.040	0.050	0.80 to 1.10	.....	0.15 to 0.25
4340	0.35 to 0.45	0.50 to 0.80	0.040	0.050	0.50 to 0.80	1.50 to 2.00	0.30 to 0.40
X4340	0.35 to 0.45	0.50 to 0.80	0.040	0.050	0.60 to 0.90	1.50 to 2.00	0.20 to 0.30
4345	0.40 to 0.50	0.50 to 0.80	0.040	0.050	0.60 to 0.90	1.50 to 2.00	0.15 to 0.25
4615	0.10 to 0.20	0.40 to 0.70	0.040	0.050	.....	1.65 to 2.00	0.20 to 0.30
4620	0.15 to 0.25	0.40 to 0.70	0.040	0.050	.....	1.65 to 2.00	0.20 to 0.30
4640	0.35 to 0.45	0.50 to 0.80	0.040	0.050	.....	1.65 to 2.00	0.20 to 0.30
4815	0.10 to 0.20	0.40 to 0.60	0.040	0.050	.....	3.25 to 3.75	0.20 to 0.30
4820	0.15 to 0.25	0.40 to 0.60	0.040	0.050	.....	3.25 to 3.75	0.20 to 0.30

Silicon range of all S.A.E. basic open hearth alloy steels shall be 0.15-0.30. For electric and acid open hearth alloy steels, the silicon content shall be a minimum of 0.15.

S. A. E. STANDARD SPECIFICATIONS

Revised January 1935

CHROMIUM STEELS

For silicon range see foot note

S.A.E. No.	Carbon Range	Manganese Range	Phosphorus Max.	Sulphur Max.	Chromium Range
5120	0.15 to 0.25	0.30 to 0.60	0.04	0.050	0.60 to 0.90
5140	0.35 to 0.45	0.60 to 0.90	0.04	0.050	0.80 to 1.10
5150	0.45 to 0.55	0.60 to 0.90	0.04	0.050	0.80 to 1.10
52100	0.95 to 1.10	0.20 to 0.50	0.03	0.035	1.20 to 1.50

CHROMIUM-VANADIUM STEELS

For silicon range see foot note

S.A.E. No.	Carbon Range	Manganese Range	Phos. Max.	Sulphur Max.	Chromium Range	Vanadium Min.	Vanadium Desired
6115	0.10 to 0.20	0.30 to 0.60	0.04	0.050	0.80 to 1.10	0.15	0.18
6120	0.15 to 0.25	0.30 to 0.60	0.04	0.050	0.80 to 1.10	0.15	0.18
6125	0.20 to 0.30	0.60 to 0.90	0.04	0.050	0.80 to 1.10	0.15	0.18
6130	0.25 to 0.35	0.60 to 0.90	0.04	0.050	0.80 to 1.10	0.15	0.18
6135	0.30 to 0.40	0.60 to 0.90	0.04	0.050	0.80 to 1.10	0.15	0.18
6140	0.35 to 0.45	0.60 to 0.90	0.04	0.050	0.80 to 1.10	0.15	0.18
6145	0.40 to 0.50	0.60 to 0.90	0.04	0.050	0.80 to 1.10	0.15	0.18
6150	0.45 to 0.55	0.60 to 0.90	0.04	0.050	0.80 to 1.10	0.15	0.18
6195	0.90 to 1.05	0.20 to 0.45	0.03	0.035	0.80 to 1.10	0.15	0.18

TUNGSTEN STEELS

For silicon range see foot note

S.A.E. No.	Carbon Range	Manganese Max.	Phosphorus Max.	Sulphur Max.	Chromium Range	Tungsten Range
71360	0.50 to 0.70	0.30	0.035	0.04	3.00 to 4.00	12.00 to 15.00
71660	0.50 to 0.70	0.30	0.035	0.04	3.00 to 4.00	15.00 to 18.00
7260	0.50 to 0.70	0.30	0.035	0.04	0.50 to 1.00	1.50 to 2.00

SILICO-MANGANESE STEELS

S.A.E. No.	Carbon Range	Manganese Range	Phosphorus Max.	Sulphur Max.	Silicon Range
9255	0.50 to 0.60	0.60 to 0.90	0.040	0.05	1.80 to 2.20
9260	0.55 to 0.65	0.60 to 0.90	0.040	0.05	1.80 to 2.20

CORROSION AND HEAT RESISTING ALLOYS

S.A.E. No.	Carbon Max.	Manganese Max.	Silicon Max.	Phosphorus Max.	Sulphur Max.	Chromium Range	Nickel Range
30905	0.08	0.20-0.70	0.75	0.030	0.030	17.00-20.00	8.00-10.00
30915	0.09-0.20	0.20-0.70	0.75	0.030	0.030	17.00-20.00	8.00-10.00
51210	0.12	0.60	0.50	0.030	0.030	11.50-13.00	.....
x51410	0.12	0.60	0.50	0.030	0.15-0.50	13.00-15.00	.....
51335	0.25-0.40	0.60	0.50	0.030	0.030	12.00-14.00	.....
51510	0.12	0.60	0.50	0.030	0.030	14.00-16.00	.....
51710	0.12	0.60	0.50	0.030	0.030	16.00-18.00	.....

Silicon range of all S.A.E. basic open hearth alloy steels shall be 0.15-0.30. For electric and acid open hearth alloy steels, the silicon content shall be a minimum of 0.15.

AVERAGE PHYSICAL PROPERTIES OF VARIOUS STEELS

This table of figures has been compiled from a large volume of tests and represents an AVERAGE of the results. It is offered as a general guide to the PROBABLE physical expectancy of the steels listed.

Under no condition may it be assumed that we guarantee the accuracy of those figures shown for steels which have not been heat treated. IT MUST BE UNDERSTOOD THAT INDIVIDUAL TESTS OF SUCH STEELS MAY DEVELOP RESULTS DIFFERING WIDELY FROM THE AVERAGES SHOWN. It is evident these figures can not be used as a basis of acceptance or rejection of material in any of the grades listed.

The size of the section, rolling temperature, permissible variation within analysis limits and the atmospheric temperature at time of rolling, all influence the final physical properties of any steel in normal state. The amount of size reduction used in cold drawing is in a large measure responsible for the physicals of cold drawn bars.

The foregoing statement together with a study of the following tabulation shows that dependable physical properties can only be secured thru carefully controlled heat treatment.

		Machinability Rating	Tensile Strength	Yield Point	Elongation in 2 Inches	Reduction of Area	Approx. Hardness Brinell	Rockwell "C"	Scleroscope	Size of Section—Quenching Temperature and Medium	Ryerson Color Markings
LEDLOY—lead bearing steels. The addition of lead to steel has practically no effect on the physical properties, but increases machinability from 20 to 40%.											
Mild Steel	Natural Hot Rolled	55%	57,000	32,000	37%	66%	113	---	20		
	Cold Drawn		67,000	42 000	30%	60%	150	---	25		
	Quenched—Drawn 1000° F.		70,000	40,000	31%	68%	143		24	1½" Rd. 1650° F. Water	
S.A.E. 1015	Natural Hot Rolled	50%	65,000	40,000	32%	65%	137	---	23		
	Cold Drawn		67.000	43,000	30%	62%	144	---	24		
	Quenched—Drawn 1000° F.		85,000	55,000	24%	67%	165	4	28	1" Rd. 1600° F. Water	Green
S.A.E. 1020	Natural Hot Rolled	52%	67,000	45,000	32%	65%	137	---	23		
	Cold Drawn		69,000	48,000	30%	63%	144	---	24		
	Quenched—Drawn 1000° F.		89,000	62,000	23%	64%	170	4	28	1" Rd. 1600° F. Water	Green
S.A.E. X1020	Natural Hot Rolled	62%	69,000	47,000	30%	58%	143	---	24		
	Cold Drawn		78,000	53,000	23%	54%	165	---	27		
	Quenched—Drawn 1000° F.		94,000	66,000	20%	52%	190	9	30	1" Rd. 1600° F. Water	Green
S.A.E. 1025	Natural Hot Rolled	58%	70,000	41,000	31%	58%	130	---	22		
	Cold Drawn		80,000	67,000	18%	48%	161	---	27		
	Quenched—Drawn 1000° F.		95,000	67,000	29%	65%	195	12	31	1" Rd. 1600° F. Water	Red
S.A.E. 1030	Natural Hot Rolled	60%	75,000	46,000	30%	56%	138	---	23		
	Cold Drawn		85,000	72,000	20%	47%	175	7	29		
	Quenched—Drawn 1000° F.	60%	98,000	73,000	27%	64%	210	14	33	1" Rd. 1575° F. Water	Blue

AVERAGE PHYSICAL PROPERTIES OF VARIOUS STEELS (Continued)

		Machinability Rating	Tensile Strength	Yield Point	Elongation in 2 Inches	Reduction of Area	Approx. Hardness Brinell	Rockwell "C"	Scleroscope	Size of Section—Quenching Temperature and Medium	Ryerson Color Markings
S.A.E. 1035	Natural Hot Rolled	60%	88,000	55,000	30%	56%	175	7	29		Blue
	Cold Drawn		92,000	59,000	25%	50%	200	12	31		
	Quenched—Drawn 1000° F.	55%	103,000	78,000	24%	62%	230	20	36	1" Rd. 1550° F. Water	
S.A.E. 1040	Natural Hot Rolled	60%	93,000	58,000	27%	52%	190	9	30		Yellow
	Cold Drawn		100,000	64,000	22%	46%	221	19	35		
	Quenched—Drawn 1000° F.		110,000	84,000	21%	58%	235	21	37	1" Rd. 1525° F. Water	
S.A.E. 1045	Natural Hot Rolled	55%	99,000	60,000	24%	47%	200	12	31		Yellow
	Cold Drawn		110,000	69,000	19%	41%	235	21	37		
	Quenched—Drawn 1000° F.	48%	114,000	88,000	20%	54%	240	23	38	1" Rd. 1500° F. Water	
Hi-Steel (as rolled)	Thickness Less than .125		75,000	60,000	20%		----	----	----		Green and White
	Thickness .125 to ¾"		70,000	55,000		55%					Red and Yellow
S.A.E. 1095	Annealed	45%	106,000	60,000	23%	47%	201	12	31		
	Quenched—Drawn 1000° F.		178,000	122,000	12%	37%	363	39	54	1" Rd. 1450° F. Oil	
Bessemer S.A.E. X1112	Cold Drawn	120-140%	83,000	73,000	15%	45%	193	10	30		Orange
Bessemer S.A.E. 1112	Natural Hot Rolled		67,000	40,000	27%	47%	140	---	23		
	Cold Drawn	100%	80,000	62,500	16%	43%	185	9	30		White
S.A.E. 1120	Natural Hot Rolled		69,000	36,000	32%	55%	117	---	20		
	Cold Drawn	80%	80,000	62,500	20%	50%	170	4	28		Black
S.A.E. X1314	Natural Hot Rolled		71,000	45,000	28%	52%	135	---	23		
	Cold Drawn	94%	82,000	63,000	18%	44%	162	2	27		Gold
	Quenched—Drawn 1000° F.		95,000	72,000	20%	46%	212	15	34	1" Rd. 1600° F. Water	
Stressproof No. 2	Cold Drawn	80%		100,000			255	25	40		Orange-Brown
*Rycase	Natural Hot Rolled		73,000	47,000	33%	63%	149	---	24		
	Cold Drawn	95%	80,000	60,000	20%	47%	160	---	27		Gold
	Quenched—Drawn 1000° F.		100,000	75,000	22%	56%	210	15	34	1" Rd. 1625° F. Water	

*Typical Minimum Physicals.

TELEPHONES { BELL: SARATOGA 6300
KEYSTONE: WEST 1644

AVERAGE PHYSICAL PROPERTIES OF VARIOUS STEELS (Continued)

		Machinability Rating	Tensile Strength	Yield Point	Elongation in 2 Inches	Reduction of Area	Approx. Hardness Brinell	Rockwell "C"	Scleroscope	Size of Section—Quenching Temperature and Medium	Ryerson Color Markings
S.A.E. X1335	Natural Hot Rolled	70%	95,000	60,000	20%	35%	185	9	30		
	Cold Drawn		105,000	80,000	15%	30%	212	15	34		
	Quenched—Drawn 1000° F.	55%	123,000	96,000	20%	53%	245	24	39	1" Rd. 1500° F. Oil	Red and Gold
S.A.E. 2315 2320	Natural Hot Rolled	50%	85,000	56,000	29%	60%	163	---	27		
	Cold Drawn		95,000	75,000	25%	58%	197	12	31		
	Quenched—Drawn 1000° F.	48%	100,000	67,000	27%	70%	210	15	34	1" Rd. 1500° F. Oil	Black and Green
S.A.E. 2330 2335	Natural Hot Rolled	45%	98,000	65,000	25%	50%	207	16	29		
	Cold Drawn		110,000	90,000	17%	47%	235	22	32		
	Quenched—Drawn 1000° F.	40%	125,000	104,000	22%	61%	270	22	42	1" Rd. 1500° F. Oil	Blue and Aluminum
S.A.E. 2340	Natural Hot Rolled	40%	110,000	80,000	22%	47%	225	19	35		
	Annealed and Cold Drawn		115,000	90,000	21%	48%	235	21	37		
	Quenched—Drawn 1000° F.	35%	137,000	119,000	21%	59%	302	31	42	1" Rd. 1450° F. Oil	Green and Pink
S.A.E. 2345 2350	Hot Rolled, Annealed	50%	108,000	75,000	23%	46%	235	22	32		
	Annealed and Cold Drawn		119,000	92,000	17%	40%	255	25	35		
	Quenched—Drawn 1000° F.	30%	140,000	130,000	19%	58%	311	32	43	1" Rd. 1450° F. Oil	Yellow and Blue
S.A.E. 3115 3120	Natural Hot Rolled	50%	75,000	60,000	30%	65%	151	---	24		
	Cold Drawn		95,000	70,000	20%	53%	201	12	31		
	Quenched—Drawn 1000° F.	43%	108,000	80,000	23%	68%	210	15	34	1" Rd. 1550° F. Oil	Black and Yellow
S.A.E. 3130	Natural Hot Rolled	45%	100,000	72,000	24%	55%	212	15	34		
	Cold Drawn		105,000	85,000	18%	48%	223	19	35		
	Quenched—Drawn 1000° F.	35%	130,000	105,000	20%	61%	285	29	40	1" Rd. 1550° F. Oil	Black and Pink
S.A.E. 3135 3140	Hot Rolled, Annealed	57%	96,000	64,000	26%	56%	195	12	31		
	Annealed and Cold Drawn		115,000	98,000	17%	45%	228	20	36		Blue and Red Unannealed:
	Quenched—Drawn 1000° F.	38%	139,000	114,000	18%	58%	281	29	44	1" Rd. 1525° F. Oil	Black and Red
S.A.E. X3140	Hot Rolled, Annealed	55%	96,000	67,000	24%	55%	195	12	31		
	Annealed and Cold Drawn		120,000	100,000	15%	42%	262	26	36		Blue and Red Unannealed:
	Quenched—Drawn 1000° F.	30%	155,000	130,000	17%	55%	321	34	45	1" Rd. 1525° F. Oil	Black and Red
S.A.E. 3150	Hot Rolled, Annealed	50%	104,000	73,000	19%	51%	229	21	32		
	Annealed and Cold Drawn		123,000	95,000	14%	33%	269	27	37		
	Quenched—Drawn 1000° F.		156,000	131,000	16%	53%	321	34	45	1" Rd. 1450° F. Oil	White and Brown

AVERAGE PHYSICAL PROPERTIES OF VARIOUS STEELS (Continued)

		Machinability Rating	Tensile Strength	Yield Point	Elongation in 2 Inches	Reduction of Area	Approx. Hardness Brinell	Rockwell "C"	Scleroscope	Size of Section—Quenching Temperature and Medium	Ryerson Color Markings
S.A.E. 3250	Hot Rolled, Annealed	44%	107,000	75,000	24%	55%	217	18	30		Aluminum and Pink
	Annealed and Cold Drawn		117,000	98,000	17%	43%	255	25	35		
	Quenched—Drawn 1000° F.		173,000	154,000	17%	53%	363	38	51	1" Rd. 1450° F. Oil	
W.D. X4130	Hot Rolled, Annealed	60%	89,000	60,000	32%	65%	179	7	29		Yellow and Green
	Annealed and Cold Drawn		112,000	78,000	18%	47%	241	23	33		
	Quenched—Drawn 1000° F.		145,000	118,000	22%	61%	302	31	42	1" Rd. 1600° F. Oil	
S.A.E. 4140	Hot Rolled, Annealed	56%	90,000	63,000	27%	58%	187	12	27		Blue and Green
	Annealed and Cold Drawn		114,000	90,000	18%	50%	241	23	33		
	Quenched—Drawn 1000° F.		156,000	131,000	17%	57%	352	37	49	1" Rd. 1575° F. Oil	
S.A.E. 4150	Hot Rolled, Annealed	54%	105,000	71,000	21%	54%	220	20	31		Yellow and Aluminum
	Annealed and Cold Drawn		124,000	100,000	16%	48%	269	27	37		
	Quenched—Drawn 1000° F.		175,000	153,000	15%	50%	375	40	56	1" Rd. 1550° F. Oil	
S.A.E. X4340	Hot Rolled, Annealed	58%	115,000	95,000	18%	45%	235	21	37		Purple and Aluminum
	Quenched—Drawn 1000° F.		187,000	160,000	15%	55%	388	41	54	1" Rd. 1500° F. Oil	
S.A.E. 4615 4620	Natural Hot Rolled	58%	82,000	55,000	30%	61%	167	4	28		Yellow and White
	Cold Drawn		98,000	70,000	18%	55%	203	14	33		
	Quenched—Drawn 1000° F.	50%	116,000	84,000	27%	70%	230	20	36	1" Rd. 1550° F. Oil	
S.A.E. 4640	Hot Rolled, Annealed	62%	100,000	87,000	21%	50%	201	12	31		
	Annealed and Cold Drawn		126,000	97,000	14%	39%	269	27	42		
	Quenched—Drawn 1000° F.		161,000	145,000	17%	54%	341	36	48	1" Rd. 1500° F. Oil	Blue and Brown
S.A.E. 4815	Natural Hot Rolled	55%	105,000	73,000	24%	58%	212	15	34		Green and Brown
	Cold Drawn		110,000	78,000	23%	55%	217	17	34		
	Quenched—Drawn 1000° F.		135,000	127,000	21%	70%	265	26	41	1" Rd. 1500° F. Oil	
S.A.E. 5150	Hot Rolled, Annealed	50%	103,000	68,000	22%	57%	201	12	31		
	Annealed and Cold Drawn		115,000	77,000	18%	52%	248	24	39		
	Quenched—Drawn 1000° F.		167,000	147,000	15%	47%	347	38	53	1" Rd. 1525° F. Oil	Gold and Purple
S.A.E. 6130	Hot Rolled, Annealed	55%	90,000	60,000	25%	60%	179	7	29		Blue and Pink
	Annealed and Cold Drawn		95,000	84,000	17%	56%	201	12	31		
	Quenched—Drawn 1000° F.		150,000	132,000	17%	58%	310	32	47	1" Rd. 1550° F. Water	

TELEPHONES | BELL: SARATOGA 6300 | KEYSTONE: WEST 1644 249 P

AVERAGE PHYSICAL PROPERTIES OF VARIOUS STEELS (Continued)

		Machinability Rating	Tensile Strength	Yield Point	Elongation in 2 Inches	Reduction of Area	Approx. Hardness Brinell	Rockwell "C"	Scleroscope	Size of Section—Quenching Temperature and Medium	Ryerson Color Markings
S.A.E. 6145	Hot Rolled, Annealed	50%	103,000	70,000	27%	51%	217	18	30		Yellow and Pink
	Annealed and Cold Drawn		118,000	94,000	20%	43%	255	25	35		
	Quenched—Drawn 1000° F.		179,000	160,000	15%	49%	388	41	54	1" Rd. 1575° F. Oil	
S.A.E. 9250	Quenched—Drawn 1000° F.		182,000	160,000	15%	32%	363	39	54	1" Rd. 1650° F. Oil	Pink and White
S.A.E. 52100	Hot Rolled, Annealed	45%	109,000	80,000	25%	57%	235	22	32		Red, White
	Quenched—Drawn 1000° F.		185,000	170,000	9%	34%	415	43	58	1" Rd. 1525° F. Oil	and Blue
H.T.M.	Hot Rolled, Annealed	60%	130,000	100,000	18%	45%	260	26	41		Orange and
	Quenched—Drawn 1000° F.		197,000	185,000	15%	51%	415	43	57	1" Rd. 1550° F. Oil	Purple
*Rytense AA	Natural Hot Rolled	80%	98,000	65,000	18%	34%	187	12	27		White and Gold
	Cold Drawn		111,000	95,000	16%	38%	223	20	31		
	Quenched—Drawn 1000° F.		136,000	99,000	20%	47%	293	30	41	1" Rd. 1500° F. Oil	
Ry-Arm Heat Treated	Hot Rolled	60%	90,000	64,000	20%	50%	215	17-23	30-35	These Special Steels are sold in the heat treated condition on the basis of these typical minimum physical properties.	Red and Aluminum
Ry-Ax Heat Treated	Hot Rolled	60%	95,000	67,000	20%	50%	220	17-23	30-35		Aluminum
Ryco Heat Treated	Hot Rolled	60%	100,000	70,000	20%	50%	220	17-23	30-35		Black and Aluminum
Rycrome Heat Treated	Hot Rolled	55%	125,000	105,000	16%	50%	269-325	27-34	42-49		Black and White
Nikrome Heat Treated	Hot Rolled	55%	125,000	105,000	16%	50%	250-280	24-28	39-43		Red and Purple
Nikrome "M" Heat Treated	Hot Rolled	65%	110,000	90,000	16%	47%	240-265	23-26	38-41		Green and Aluminum

*Typical Minimum Physicals.

WEIGHT OF ROUND STEEL BARS

Size in Inches	Wt. per ft. lbs.	Wt. of 12′ bar	Wt. of 16′ bar	Wt. of 20′ bar	Size in Inches	Wt. per ft. lbs.	Wt. of 12′ bar	Wt. of 16′ bar	Wt. of 20′ bar
1/16	.010	0.120	0.16	0.200	2 1/16	11.36	136.32	181.76	227.2
5/64	.016	0.192	0.256	0.320	2 1/8	12.06	144.72	192.96	241.2
3/32	.024	0.288	0.384	0.480	2 3/16	12.78	153.36	204.48	255.6
7/64	.032	0.384	0.512	0.640	2 1/4	13.52	162.24	216.32	270.4
1/8	.042	0.504	0.672	0.840	2 5/16	14.28	171.36	228.48	285.6
9/64	.053	0.636	0.848	1.06	2 3/8	15.06	180.72	240.96	301.2
5/32	.065	0.780	1.04	1.30	2 7/16	15.87	190.44	253.92	317.4
11/64	.079	0.948	1.26	1.58	2 1/2	16.69	200.28	267.04	333.8
3/16	.094	1.13	1.50	1.88	2 9/16	17.53	210.36	280.48	350.6
13/64	.110	1.32	1.76	2.20	2 5/8	18.40	220.80	294.40	368.0
7/32	.128	1.54	2.05	2.56	2 11/16	19.29	231.48	308.64	385.8
15/64	.147	1.76	2.35	2.94	2 3/4	20.20	242.40	323.20	404.0
1/4	.167	2.00	2.67	3.34	2 13/16	21.12	253.44	337.92	422.4
17/64	.189	2.27	3.02	3.78	2 7/8	22.07	264.84	353.12	441.4
9/32	.211	2.53	3.38	4.22	2 15/16	23.04	276.48	368.64	460.8
19/64	.235	2.82	3.76	4.70	3	24.03	288.36	384.48	480.6
5/16	.261	3.13	4.18	5.22	3 1/16	25.04	300.48	400.64	500.8
21/64	.288	3.46	4.61	5.76	3 1/8	26.08	312.96	417.28	521.6
11/32	.316	3.79	5.06	6.32	3 3/16	27.13	325.56	434.08	542.6
23/64	.345	4.14	5.52	6.90	3 1/4	28.21	338.52	451.36	564.2
3/8	.376	4.51	6.02	7.52	3 5/16	29.30	351.60	468.80	586.0
25/64	.408	4.90	6.53	8.16	3 3/8	30.42	365.04	486.72	608.4
13/32	.441	5.29	7.06	8.82	3 7/16	31.55	378.60	504.80	631.0
27/64	.476	5.71	7.62	9.52	3 1/2	32.71	392.52	523.36	654.2
7/16	.511	6.13	8.18	10.22	3 9/16	33.89	406.68	542.24	677.8
29/64	.549	6.59	8.78	10.98	3 5/8	35.09	421.08	561.44	701.8
15/32	.587	7.04	9.39	11.74	3 11/16	36.31	435.72	580.96	726.2
31/64	.627	7.52	10.03	12.54	3 3/4	37.55	450.60	600.80	751.0
1/2	.668	8.02	10.69	13.36	3 13/16	38.81	465.72	620.96	776.2
33/64	.710	8.52	11.36	14.20	3 7/8	40.13	481.56	642.08	802.6
17/32	.754	9.05	12.06	15.08	3 15/16	41.40	496.80	662.40	828.0
35/64	.797	9.56	12.75	15.94	4	42.73	512.76	683.68	854.6
9/16	.845	10.14	13.52	16.90	4 1/16	44.07	528.84	705.12	881.4
37/64	.893	10.72	14.29	17.86	4 1/8	45.44	545.28	727.04	908.8
19/32	.942	11.30	15.07	18.84	4 3/16	46.73	561.96	749.28	936.6
39/64	.992	11.90	15.87	19.84	4 1/4	48.23	578.76	771.68	964.6
5/8	1.04	12.48	16.64	20.80	4 5/16	49.66	595.92	794.56	993.2
41/64	1.10	13.20	17.60	22.00	4 3/8	51.11	613.32	817.76	1022.2
21/32	1.15	13.80	18.40	23.00	4 7/16	52.58	630.96	841.28	1051.6
11/16	1.26	15.12	20.16	25.20	4 1/2	54.08	648.96	865.28	1081.6
23/32	1.38	16.56	22.08	27.60	4 9/16	55.59	667.08	889.44	1111.8
47/64	1.44	17.28	23.04	28.80	4 5/8	57.12	686.04	914.72	1143.4
3/4	1.50	18.00	24.00	30.00	4 11/16	58.68	704.16	938.88	1173.6
49/64	1.57	18.84	25.12	31.40	4 3/4	60.25	723.00	964.00	1205.0
25/32	1.63	19.56	26.08	32.60	4 7/8	63.52	762.24	1016.32	1270.4
13/16	1.76	21.12	28.16	35.2	4 15/16	65.10	781.20	1041.60	1302.0
27/32	1.90	22.80	30.40	38.0	5	66.76	801.12	1068.16	1335.2
7/8	2.04	24.48	32.64	40.8	5 1/8	70.14	841.68	1122.24	1402.8
29/32	2.19	26.28	35.04	43.8	5 1/4	73.60	883.20	1177.60	1472.0
15/16	2.35	28.20	37.60	47.0	5 5/16	75.36	904.32	1205.76	1507.2
31/32	2.51	30.12	40.16	50.2	5 7/16	78.95	947.40	1263.20	1579.0
1	2.67	32.04	42.72	53.4	5 1/2	80.78	969.36	1292.48	1615.6
1 1/32	2.84	34.08	45.44	56.8	5 3/4	88.30	1059.60	1412.80	1766.0
1 1/16	3.01	36.12	48.16	60.2	5 7/8	92.17	1106.04	1474.72	1843.4
1 1/8	3.38	40.56	54.08	67.6	5 15/16	94.14	1129.68	1506.24	1882.8
1 3/16	3.77	45.24	60.32	75.4	6	96.13	1153.56	1538.08	1922.6
1 1/4	4.17	50.04	66.72	83.4	6 1/4	104.31	1251.72	1668.96	2086.2
1 5/16	4.60	55.20	73.60	92.0	6 1/2	112.82	1353.84	1805.12	2256.4
1 3/8	5.05	60.60	80.80	101.0	6 3/4	121.78	1461.36	1948.48	2435.6
1 7/16	5.52	66.24	88.32	110.4	7	130.85	1570.20	2093.60	2617.0
1 1/2	6.01	72.12	96.16	120.2	7 1/2	150.21	1803.96	2405.28	3006.0
1 9/16	6.52	78.24	104.32	130.4	8	170.90	2050.80	2734.40	3418.0
1 5/8	7.05	84.60	112.80	141.0	9	216.30	2595.60	3460.80	4326.0
1 11/16	7.60	91.20	121.60	152.0	10	267.00	3204.00	4272.00	5340.0
1 3/4	8.18	98.16	130.88	163.6	10 1/2	294.40	3532.80	4710.40	5888.0
1 13/16	8.77	105.24	140.32	175.4	11	323.10	3877.20	5169.60	6462.0
1 7/8	9.39	112.68	150.24	187.8	11 1/2	353.10	4237.20	5649.60	7062.0
1 15/16	10.02	120.24	160.32	200.4	12	384.50	4614.00	6152.00	7690.0
2	10.68	128.16	170.88	213.6	12 1/16	390.00	4680.00	6240.00	7800.0

WEIGHT OF SQUARE STEEL BARS

Size in Inches	Wt. per ft. lbs.	Wt. of 12′ bar	Wt. of 16′ bar	Wt. of 20′ bar
1/8	.053	.64	.85	1.06
5/32	.083	1.00	1.33	1.66
3/16	.120	1.44	1.92	2.40
7/32	.163	1.96	2.61	3.26
1/4	.213	2.56	3.41	4.26
9/32	.269	3.23	4.30	5.38
5/16	.332	3.98	5.31	6.64
11/32	.402	4.82	6.43	8.04
3/8	.478	5.74	7.65	9.56
7/16	.651	7.81	10.42	13.02
1/2	.850	10.20	13.60	17.00
9/16	1.08	12.96	17.28	21.60
19/32	1.20	14.40	19.20	24.00
5/8	1.33	15.96	21.28	26.60
11/16	1.61	19.32	25.76	32.20
3/4	1.91	22.92	30.56	38.20
13/16	2.24	26.88	35.84	44.80
7/8	2.60	31.20	41.60	52.00
15/16	2.99	35.88	47.84	59.80
1	3.40	40.80	54.40	68.00
1 1/16	3.83	45.96	61.28	76.60
1 1/8	4.30	51.60	68.80	86.00
1 3/16	4.80	57.60	76.80	96.00
1 1/4	5.31	63.72	84.96	106.20
1 5/16	5.86	70.32	93.76	117 20
1 3/8	6.43	77.16	102.88	128.60
1 7/16	7.03	84.36	112.48	140.60
1 1/2	7.65	91.80	122.40	153.00
1 9/16	8.30	99.60	132.80	166.00
1 5/8	8.98	107.76	143.68	179.60
1 11/16	9.68	116.16	154.88	193.60
1 3/4	10.41	124.92	166.56	208.20
1 13/16	11.17	134.04	178.72	223.40
1 7/8	11.96	143.52	191.36	239.20
1 15/16	12.76	153.12	204.16	255.20
2	13.60	163.20	217.60	272.00
2 1/16	14.46	173.52	231.36	289.20
2 1/8	15.36	184.32	245.76	307.20
2 3/16	16.27	195.24	260.32	325.40
2 1/4	17.21	206.52	275.36	344.20
2 5/16	18.18	218.16	290.88	363.60
2 3/8	19.19	230.28	307.04	383.80
2 7/16	20.20	242.40	323.20	404.00
2 1/2	21.25	255.00	340.00	425.00
2 9/16	22.32	267.84	357.12	446.40
2 5/8	23.42	281.04	374.72	468.40
2 3/4	25.71	308.52	411.36	514.20
2 7/8	28.10	337.20	449.60	562.00
3	30.60	367.20	489.60	612.00
3 1/8	33.20	398.40	531.20	664.00
3 1/4	35.91	431.28	575.04	718.80
3 3/8	38.70	464.40	619.20	774.00
3 1/2	41.65	499.80	666.40	833.00
3 3/4	47.80	573.60	764.80	956.00
4	54.40	652.80	870.40	1088.00
4 1/2	69.85	837.72	1116.96	1396.20
5	85.00	1020.00	1360.00	1700.00
6	122.40	1468.80	1958.40	2448.00

WEIGHT OF HEXAGON STEEL BARS

Size in Inches	Wt. per ft. lbs.	Wt. of 12′ bar	Wt. of 16′ bar	Wt. of 20′ bar
1/8	.046	.55	.74	.92
5/32	.072	.86	1.15	1.44
3/16	.104	1.25	1.66	2.08
7/32	.141	1.69	2.26	2.82
1/4	.184	2.21	2.94	3.68
9/32	.233	2.80	3.73	4.66
5/16	.288	3.46	4.61	5.76
11/32	.348	4.18	5.57	6.96
3/8	.414	4.97	6.62	8.28
7/16	.564	6.77	9.02	11.28
1/2	.737	8.84	11.79	14.74
9/16	.932	11.18	14.91	18.64
5/8	1.150	13.80	18.40	23.00
11/16	1.393	16.72	22.29	27.86
3/4	1.658	19.90	26.53	33.16
13/16	1.944	23.33	31.10	38.88
7/8	2.256	27.07	36.10	45.12
15/16	2.588	31.06	41.41	51.76
1	2.944	35.33	47.10	58.88
1 1/16	3.324	39.89	53.18	66.48
1 1/8	3.727	44.72	59.63	74.54
1 3/16	4.152	49.82	66.42	83.04
1 1/4	4.601	55.21	73.62	92.02
1 5/16	5.072	60.86	81.15	101.44
1 3/8	5.567	66.80	89.07	111.34
1 7/16	6.085	73.02	97.36	121.70
1 1/2	6.625	79.50	106.00	132.50
1 9/16	7.189	86.27	115.02	143.78
1 5/8	7.775	93.30	124.40	155.50
1 11/16	8.385	100.62	134.16	167.70
1 3/4	9.018	108.22	144.29	180.36
1 13/16	9.673	116.08	154.77	193.46
1 7/8	10.355	124.26	165.68	207.10
1 15/16	11.053	132.64	176.85	221.06
2	11.780	141.36	188.48	235.60
2 1/16	12.528	150.34	200.45	250.56
2 1/8	13.300	159.60	212.80	266.00
2 3/16	14.092	169.10	225.47	281.84
2 1/4	14.911	178.93	238.58	298.22
2 5/16	15.747	188.96	251.95	314.94
2 3/8	16.613	199.36	265.81	332.26
2 7/16	17.496	209.95	279.94	349.92
2 1/2	18.403	220.84	294.45	368.06
2 9/16	19.337	232.04	309.39	386.74
2 5/8	20.294	242.69	323.58	404.48
2 3/4	22.273	267.28	356.37	445.46
2 7/8	24.343	292.12	389.49	486.86
3	26.500	318.00	424.00	530.00
3 1/8	28.755	345.06	460.08	575.10
3 1/4	31.101	373.21	497.62	622.02
3 3/8	33.540	402.48	536.64	670.80
3 1/2	36.070	432.84	577.12	721.40
3 3/4	41.407	496.88	662.51	828.14
4	47.112	565.34	753.79	942.24
4 1/2	59.636	715.63	954.18	1192.72

WEIGHT OF FLAT STEEL BARS

Gauge and Size in Inches	Wt. per ft. lbs.	Wt. of 12′ bar	Wt. of 16′ bar	Wt. of 20′ bar
3/32x				
1/4	0.080	0.96	1.28	1.60
3/8	0.120	1.44	1.92	2.40
1/2	0.159	1.91	2.54	3.18
5/8	0.199	2.39	3.18	3.98
3/4	0.239	2.87	3.82	4.78
7/8	0.279	3.35	4.46	5.58
1	0.319	3.83	5.10	6.38
1 1/4	0.398	4.78	6.37	7.96
1 1/2	0.478	5.74	7.65	9.56
1 3/4	0.558	6.70	8.93	11.16
2	0.638	7.66	10.21	12.76
No. 12x				
3/8	0.139	1.67	2.22	2.78
1/2	0.185	2.22	2.96	3.70
5/8	0.232	2.78	3.71	4.64
3/4	0.278	3.34	4.45	5.56
7/8	0.324	3.89	5.18	6.48
1	0.371	4.45	5.94	7.42
1 1/8	0.417	5.00	6.67	8.34
1 1/4	0.463	5.56	7.41	9.26
1 3/8	0.510	6.12	8.16	10.20
1 1/2	0.556	6.67	8.90	11.12
1 3/4	0.649	7.79	10.38	12.98
2	0.741	8.89	11.86	14.82
2 1/4	0.834	10.01	13.34	16.68
2 1/2	0.927	11.12	14.83	18.54
2 3/4	1.019	12.23	16.30	20.38
3	1.112	13.34	17.79	22.24
3 1/2	1.297	15.56	20.75	25.94
4	1.482	17.78	23.71	29.64
1/8x				
3/16	0.080	.960	1.28	1.60
1/4	0.106	1.27	1.70	2.12
5/16	0.133	1.60	2.13	2.66
3/8	0.159	1.91	2.54	3.18
1/2	0.213	2.56	3.41	4.26
5/8	0.266	3.19	4.26	5.32
3/4	0.319	3.83	5.10	6.38
7/8	0.372	4.46	5.95	7.44
1	0.425	5.10	6.80	8.50
1 1/8	0.477	5.72	7.63	9.54
1 1/4	0.531	6.37	8.50	10.62
1 3/8	0.584	7.01	9.34	11.68
1 1/2	0.638	7.66	10.21	12.76
1 5/8	0.691	8.29	11.06	13.82
1 3/4	0.744	8.93	11.90	14.88
2	0.850	10.20	13.60	17.00
2 1/4	0.956	11.47	15.30	19.12
2 1/2	1.063	12.76	17.01	21.26
2 3/4	1.169	14.03	18.70	23.38
3	1.275	15.30	20.40	25.50
3 1/4	1.381	16.57	22.10	27.62
3 1/2	1.488	17.86	23.81	29.76
3 3/4	1.594	19.13	25.50	31.88
4	1.700	20.40	27.20	34.00
4 1/2	1.913	22.96	30.61	38.26
5	2.125	25.50	34.00	42.50
5 1/2	2.338	28.06	37.41	46.76
6	2.550	30.60	40.80	51.00
7	2.975	35.70	47.60	59.50
8	3.400	40.80	54.40	68.00
9	3.825	45.90	61.20	76.50
10	4.250	51.00	68.00	85.00
12	5.100	61.20	81.60	102.00
No. 10x				
3/8	0.171	2.05	2.74	3.42
1/2	0.228	2.74	3.65	4.56

Gauge and Size in Inches	Wt. per ft. lbs.	Wt. of 12′ bar	Wt. of 16′ bar	Wt. of 20′ bar
No. 10x				
5/8	0.285	3.42	4.56	5.70
3/4	0.342	4.10	5.47	6.84
7/8	0.399	4.79	6.38	7.98
1	0.456	5.47	7.30	9.12
1 1/8	0.513	6.16	8.21	10.26
1 1/4	0.570	6.84	9.12	11.40
1 3/8	0.627	7.52	10.03	12.54
1 1/2	0.683	8.20	10.93	13.66
1 3/4	0.797	9.56	12.75	15.94
2	0.911	10.93	14.58	18.22
2 1/4	1.025	12.30	16.40	20.50
2 1/2	1.139	13.67	18.22	22.78
2 3/4	1.253	15.04	20.05	25.06
3	1.367	16.40	21.87	27.34
3 1/4	1.481	17.77	23.70	29.62
3 1/2	1.595	19.14	25.52	31.90
4	1.822	21.86	29.15	36.44
4 1/2	2.050	24.60	32.80	41.00
5	2.278	27.34	36.45	45.56
5 1/2	2.506	30.07	40.10	50.12
6	2.734	32.81	43.74	54.68
7	3.189	38.27	51.02	63.78
8	3.645	43.74	58.32	72.90
9	4.100	49.20	65.60	82.00
5/32x				
1/4	0.133	1.60	2.13	2.66
5/16	0.166	1.99	2.66	3.32
3/8	0.199	2.39	3.18	3.98
3/16x				
1/4	.160	1.92	2.56	3.20
5/16	.199	2.39	3.18	3.98
3/8	.239	2.87	3.82	4.78
7/16	.279	3.35	4.46	5.58
1/2	.319	3.83	5.10	6.38
9/16	.359	4.31	5.74	7.18
5/8	.398	4.78	6.37	7.96
3/4	.478	5.74	7.65	9.56
7/8	.558	6.70	8.93	11.16
1	.638	7.66	10.21	12.76
1 1/8	.717	8.60	11.47	14.34
1 1/4	.797	9.56	12.75	15.94
1 3/8	.877	10.52	14.03	17.54
1 1/2	.956	11.47	15.30	19.12
1 3/4	1.116	13.39	17.86	22.32
1 7/8	1.195	14.34	19.12	23.90
2	1.275	15.30	20.40	25.50
2 1/4	1.434	17.21	22.94	28.68
2 1/2	1.594	19.13	25.50	31.88
2 3/4	1.753	21.04	28.05	35.06
3	1.913	22.96	30.61	38.26
3 1/4	2.072	24.86	33.15	41.44
3 1/2	2.231	26.77	35.70	44.62
3 3/4	2.391	28.69	38.26	47.82
4	2.550	30.60	40.80	51.00
4 1/2	2.868	34.42	45.89	57.36
5	3.188	38.26	51.01	63.76
6	3.825	45.90	61.20	76.50
7/32x				
5/16	0.232	2.78	3.71	4.64
3/8	0.279	3.35	4.46	5.58
1/4x				
5/16	.266	3.19	4.26	5.32
3/8	.319	3.83	5.10	6.38
7/16	.372	4.46	5.95	7.44
1/2	.425	5.10	6.80	8.50

(Continued)

WEIGHT OF FLAT STEEL BARS

(Continued)

Size in Inches	Wt. per ft. lbs.	Wt. of 12′ bar	Wt. of 16′ bar	Wt. of 20′ bar
1/4x				
9/16	.478	5.74	7.65	9.56
5/8	.531	6.37	8.50	10.62
11/16	.584	7.01	9.34	11.68
3/4	.638	7.66	10.21	12.76
13/16	.691	8.29	11.06	13.82
7/8	.744	8.93	11.90	14.88
15/16	.797	9.56	12.75	15.94
1	.850	10.20	13.60	17.00
1 1/8	.956	11.47	15.30	19.12
1 1/4	1.063	12.76	17.01	21.26
1 3/8	1.169	14.03	18.70	23.38
1 1/2	1.275	15.30	20.40	25.50
1 5/8	1.381	16.57	22.10	27.62
1 3/4	1.488	17.86	23.81	29.76
1 7/8	1.594	19.13	25.50	31.88
2	1.700	20.40	27.20	34.00
2 1/4	1.913	22.96	30.61	38.26
2 1/2	2.125	25.50	34.00	42.50
2 3/4	2.338	28.06	37.41	46.76
3	2.550	30.60	40.80	51.00
3 1/4	2.760	33.12	44.16	55.20
3 1/2	2.975	35.70	47.60	59.50
3 3/4	3.190	38.28	51.04	63.80
4	3.400	40.80	54.40	68.00
4 1/4	3.613	43.36	57.81	72.26
4 1/2	3.825	45.90	61.20	76.50
5	4.250	51.00	68.00	85.00
5 1/2	4.675	56.10	74.80	93.50
6	5.100	61.20	81.60	102.00
8	6.800	81.60	108.80	136.00
10	8.500	102.00	136.00	170.00
12	10.200	122.40	163.20	204.00
5/16x				
3/8	.398	4.78	6.37	7.96
7/16	.464	5.57	7.42	9.28
1/2	.531	6.37	8.50	10.62
9/16	.598	7.18	9.57	11.96
5/8	.664	7.97	10.62	13.28
11/16	.731	8.77	11.70	14.62
3/4	.797	9.56	12.75	15.94
7/8	.930	11.16	14.88	18.60
1	1.063	12.76	17.01	21.26
1 1/8	1.195	14.34	19.12	23.90
1 1/4	1.328	15.94	21.25	26.56
1 3/8	1.461	17.53	23.38	29.22
1 1/2	1.594	19.13	25.50	31.88
1 3/4	1.859	22.31	29.74	37.18
2	2.125	25.50	34.00	42.50
2 1/8	2.258	27.10	36.13	45.16
2 1/4	2.391	28.69	38.26	47.82
2 1/2	2.656	31.87	42.50	53.12
2 3/4	2.922	35.06	46.75	58.44
3	3.188	38.26	51.01	63.76
3 1/4	3.453	41.44	55.25	69.06
3 1/2	3.719	44.63	59.50	74.38
4	4.250	51.00	68.00	85.00
4 1/2	4.781	57.37	76.50	95.62
5	5.313	63.76	85.01	106.26
6	6.375	76.50	102.00	127.50
8	8.500	102.00	136.00	170.00
10	10.625	127.50	170.00	212.50
12	12.750	153.00	204.00	255.00
3/8x				
7/16	.558	6.70	8.93	11.16

Size in Inches	Wt per ft. lbs.	Wt of 12′ bar	Wt of 16′ bar	Wt. of 20′ bar
3/8x				
1/2	.638	7.66	10.21	12.76
9/16	.717	8.60	11.47	14.34
5/8	.797	9.56	12.75	15.94
11/16	.877	10.52	14.03	17.54
3/4	.956	11.47	15.30	19.12
7/8	1.116	13.39	17.86	22.32
1	1.275	15.30	20.40	25.50
1 1/8	1.434	17.21	22.94	28.68
1 1/4	1.594	19.13	25.50	31.88
1 3/8	1.753	21.04	28.05	35.06
1 1/2	1.913	22.96	30.61	38.26
1 5/8	2.072	24.86	33.15	41.44
1 3/4	2.231	26.77	35.70	44.62
1 7/8	2.391	28.69	38.26	47.82
2	2.550	30.60	40.80	51.00
2 1/4	2.869	34.43	45.90	57.38
2 1/2	3.188	38.26	51.01	63.76
2 3/4	3.506	42.07	56.10	70.12
3	3.825	45.90	61.20	76.50
3 1/4	4.144	49.73	66.30	82.88
3 1/2	4.463	53.56	71.41	89.26
3 3/4	4.781	57.37	76.50	95.62
4	5.100	61.20	81.60	102.00
4 1/4	5.419	65.03	86.70	108.38
4 1/2	5.738	68.86	91.81	114.76
5	6.375	76.50	102.00	127.50
5 1/2	7.013	84.16	112.21	140.26
6	7.650	91.80	122.40	153.00
8	10.200	122.40	163.20	204.00
10	12.750	153.00	204.00	255.00
12	15.300	183.60	244.80	306.00
7/16x				
1/2	.744	8.93	11.90	14.88
9/16	.837	10.04	13.39	16.74
5/8	.930	11.16	14.88	18.60
3/4	1.116	13.39	17.86	22.32
7/8	1.301	15.61	20.82	26.02
1	1.488	17.86	23.81	29.76
1 1/8	1.673	20.08	26.77	33.46
1 1/4	1.859	22.31	29.74	37.18
1 1/2	2.231	26.77	35.70	44.62
1 3/4	2.603	31.24	41.65	52.06
2	2.975	35.70	47.60	59.50
2 1/4	3.347	40.16	53.55	66.94
2 1/2	3.719	44.63	59.50	74.38
2 3/4	4.091	49.09	65.46	81.82
3	4.463	53.56	71.41	89.26
3 1/4	4.830	57.96	77.28	96.60
3 1/2	5.210	62.52	83.36	104.20
4	5.950	71.40	95.20	119.00
4 1/2	6.694	80.33	107.10	133.88
5	7.438	89.26	119.01	148.76
6	8.925	107.10	142.80	178.50
1/2x				
9/16	.956	11.47	15.30	19.12
5/8	1.063	12.76	17.01	21.26
11/16	1.169	14.03	18.70	23.38
3/4	1.275	15.30	20.40	25.50
13/16	1.382	16.58	22.11	27.64
7/8	1.488	17.86	23.81	29.76
1	1.700	20.40	27.20	34.00
1 1/8	1.913	22.96	30.61	38.26
1 1/4	2.125	25.50	34.00	42.50

(Continued)

WEIGHT OF FLAT STEEL BARS

(Continued)

Size in Inches	Wt. per ft. lbs.	Wt. of 12′ bar	Wt. of 16′ bar	Wt. of 20′ bar
½x				
1 ⅜	2.338	28.06	37.41	46.76
1 ½	2.550	30.60	40.80	51.00
1 ⅝	2.763	33.16	44.21	55.26
1 ¾	2.975	35.70	47.60	59.50
1 ⅞	3.188	38.26	51.01	63.76
2	3.400	40.80	54.40	68.00
2 ¼	3.825	45.90	61.20	76.50
2 ½	4.250	51.00	68.00	85.00
2 ¾	4.675	56.10	74.80	93.50
3	5.100	61.20	81.60	102.00
3 ¼	5.525	66.30	88.40	110.50
3 ½	5.950	71.40	95.20	119.00
3 ¾	6.375	76.50	102.00	127.50
4	6.800	81.60	108.80	136.00
4 ¼	7.225	86.70	115.60	144.50
4 ½	7.650	91.80	122.40	153.00
4 ¾	8.075	96.90	129.20	161.50
5	8.500	102.00	136.00	170.00
5 ¼	8.925	107.10	142.80	178.50
5 ½	9.350	112.20	149.60	187.00
5 ¾	9.775	117.30	156.40	195.50
6	10.200	122.40	163.20	204.00
8	13.600	163.20	217.60	272.00
10	17.000	204.00	272.00	340.00
12	20.400	244.80	326.40	408.00
9/16x				
⅝	1.200	14.40	19.20	24.00
¾	1.434	17.21	22.94	28.68
⅞	1.673	20.08	26.77	33.46
1	1.913	22.96	30.61	38.26
1 ¼	2.391	28.69	38.26	47.82
1 ½	2.869	34.43	45.90	57.38
1 ¾	3.347	40.16	53.55	66.94
2	3.825	45.90	61.20	76.50
2 ½	4.781	57.37	76.50	95.62
3	5.738	68.86	91.81	114.76
⅝x				
11/16	1.461	17.53	23.38	29.22
¾	1.594	19.13	25.50	31.88
13/16	1.727	20.72	27.63	34.54
⅞	1.859	22.31	29.74	37.18
1	2.125	25.50	34.00	42.50
1 ⅛	2.391	28.69	38.26	47.82
1 ¼	2.656	31.87	42.50	53.12
1 ⅜	2.922	35.06	46.75	58.44
1 ½	3.188	38.26	51.01	63.76
1 ⅝	3.453	41.44	55.25	69.06
1 ¾	3.719	44.63	59.50	74.38
1 ⅞	3.984	47.81	63.74	79.68
2	4.250	51.00	68.00	85.00
2 ¼	4.781	57.37	76.50	95.62
2 ½	5.313	63.76	85.01	106.26
2 ¾	5.844	70.13	93.50	116.88
3	6.375	76.50	102.00	127.50
3 ¼	6.906	82.87	110.50	138.12
3 ½	7.438	89.26	119.01	148.76
3 ¾	7.969	95.63	127.50	159.38
4	8.500	102.00	136.00	170.00
4 ¼	9.031	108.37	144.50	180.62
4 ½	9.563	114.76	153.01	191.26
4 ¾	10.094	121.13	161.50	201.88
5	10.625	127.50	170.00	212.50
5 ½	11.688	140.26	187.01	233.76

Size in Inches	Wt. per ft. lbs.	Wt. of 12′ bar	Wt. of 16′ bar	Wt. of 20′ bar
⅝x				
6	12.750	153.00	204.00	255.00
7	14.875	178.50	238.00	297.50
8	17.000	204.00	272.00	340.00
10	21.250	255.00	340.00	425.00
12	25.500	306.00	408.00	510.00
11/16x				
¾	1.753	21.04	28.05	35.06
13/16	1.899	22.79	30 38	37.98
⅞	2.050	24.60	32.80	41.00
1	2.337	28.04	37.39	46.74
1 ⅛	2.630	31.56	42.08	52.60
1 ¼	2.922	35.06	46.75	58.44
1 ½	3.506	42.07	56.10	70.12
1 ¾	4.090	49.08	65.44	81.80
2	4.675	56.10	74.80	93.50
¾x				
13/16	2.072	24.86	33.15	41.44
⅞	2.231	26.77	35.70	44.62
1	2.550	30.60	40.80	51.00
1 ⅛	2.869	34.43	45.90	57.38
1 ¼	3.188	38.26	51.01	63.76
1 ⅜	3.506	42.07	56.10	70.12
1 ½	3.825	45.90	61.20	76.50
1 ⅝	4.144	49.73	66.30	82.88
1 ¾	4.463	53.56	71.41	89.26
2	5.100	61.20	81.60	102.00
2 ¼	5.738	68.86	91.81	114.76
2 ½	6.375	76.50	102.00	127.50
2 ¾	7.013	84.16	112.21	140.26
3	7.650	91.80	122.40	153.00
3 ¼	8.288	99.46	132.61	165.76
3 ½	8.925	107.10	142.80	178.50
4	10.200	122.40	163.20	204.00
4 ½	11.475	137.70	183.60	229.50
5	12.750	153.00	204.00	255.00
5 ½	14.025	168.30	224.40	280.50
6	15.300	183.60	244.80	306.00
8	20.400	244.80	326.40	408.00
10	25.000	300.00	400.00	500.00
12	30.600	367.20	489.60	612.00
⅞x				
1	2.975	35.70	47.60	59.50
1 ⅛	3.347	40.16	53.55	66.94
1 ¼	3.719	44.63	59.50	74.38
1 ⅜	4.091	49.09	65.46	81.82
1 ½	4.463	53.56	71.41	89.26
1 ¾	5.206	62.47	83.30	104.12
2	5.950	71.40	95.20	119.00
2 ¼	6.690	80.28	107.04	133.80
2 ½	7.438	89.26	119.01	148.76
2 ¾	8.180	98.16	130.88	163.60
3	8.925	107.10	142.80	178.50
3 ¼	9.669	116.08	154.70	193.38
3 ½	10.413	124.96	166.61	208.26
4	11.900	142.80	190.40	238.00
4 ½	13.388	160.66	214.21	267.76
5	14.875	178.50	238.00	297.50
6	17.850	214.20	285.60	357.00
8	23.800	285.60	380.80	476.00
10	29.750	357.00	476.00	595.00
12	35.700	428.40	571.20	714.00

(Continued)

WEIGHT OF FLAT STEEL BARS

(Continued)

Size in Inches	Wt. per ft. lbs.	Wt. of 12′ bar	Wt. of 16′ bar	Wt. of 20′ bar
1x				
1 ⅛	3.825	45.90	61.20	76.50
1 ¼	4.250	51.00	68.00	85.00
1 ⅜	4.675	56.10	74.80	93.50
1 ½	5.100	61.20	81.60	102.00
1 ⅝	5.525	66.30	88.40	110.50
1 ¾	5.950	71.40	95.20	119.00
2	6.800	81.60	108.80	136.00
2 ¼	7.650	91.80	122.40	153.00
2 ½	8.500	102.00	136.00	170.00
2 ¾	9.350	112.20	149.60	187.00
3	10.200	122.40	163.20	204.00
3 ¼	11.050	132.60	176.80	221.00
3 ½	11.900	142.80	190.40	238.00
3 ¾	12.750	153.00	204.00	255.00
4	13.600	163.20	217.60	272.00
4 ½	15.300	183.60	244.80	306.00
5	17.000	204.00	272.00	340.00
5 ½	18.700	224.40	299.20	374.00
6	20.400	244.80	326.40	408.00
8	27.200	326.40	435.20	544.00
10	34.000	408.00	544.00	680.00
12	40.800	489.60	652.80	816.00
1⅛x				
1 ¼	4.781	57.37	76.50	95.62
1 ⅜	5.259	63.11	84.14	105.18
1 ½	5.738	68.86	91.81	114.76
1 ⅝	6.216	74.59	99.46	124.32
1 ¾	6.694	80.33	107.10	133.88
2	7.650	91.80	122.40	153.00
2 ¼	8.606	103.27	137.70	172.12
2 ½	9.562	114.74	152.99	191.24
3	11.476	137.71	183.62	229.52
4	15.300	183.60	244.80	306.00
1¼x				
1 ⅜	5.844	70.13	93.50	116.88
1 ½	6.375	76.50	102.00	127.50
1 ⅝	6.906	82.87	110.50	138.12
1 ¾	7.438	89.26	119.01	148.76
1 ⅞	7.969	95.63	127.50	159.38
2	8.500	102.00	136.00	170.00
2 ¼	9.563	114.76	153.01	191.26
2 ½	10.625	127.50	170.00	212.50
2 ¾	11.688	140.26	187.01	233.76
3	12.750	153.00	204.00	255.00
3 ¼	13.813	165.76	221.01	276.26
3 ½	14.875	178.50	238.00	297.50
4	17.000	204.00	272.00	340.00
4 ½	19.125	229.50	306.00	382.50
5	21.250	255.00	340.00	425.00
5 ½	23.370	280.44	373.92	467.40
6	25.500	306.00	408.00	510.00
8	34.000	408.00	544.00	680.00
10	42.500	510.00	680.00	850.00
12	51.000	612.00	816.00	1020.00
1⅜x				
2	9.35	112.20	149.60	187.00
3	14.02	168.24	224.32	280.40
1½x				
1 ⅝	8.28	99.36	132.48	165.60
1 ¾	8.92	107.04	142.72	178.40
2	10.20	122.40	163.20	204.00
2 ¼	11.47	137.64	183.52	229.40
2 ½	12.75	153.00	204.00	255.00
2 ¾	14.02	168.24	224.32	280.40

Size in Inches	Wt. per ft. lbs.	Wt. of 12′ bar	Wt. of 16′ bar	Wt. of 20′ bar
1½x				
3	15.30	183.60	244.80	306.00
3 ¼	16.57	198.84	265.12	331.40
3 ½	17.85	214.20	285.60	357.00
4	20.40	244.80	326.40	408.00
4 ½	22.95	275.40	367.20	459.00
5	25.50	306.00	408.00	510.00
5 ½	28.05	336.60	448.80	561.00
6	30.60	367.20	489.60	612.00
8	40.80	489.60	652.80	816.00
10	51.00	612.00	816.00	1020.00
12	61.20	734.40	979.20	1224.00
1¾x				
2	11.90	142.80	190.40	238.00
2 ¼	13.39	160.68	214.24	267.80
2 ½	14.87	178.44	237.92	297.40
2 ¾	16.36	196.32	261.76	327.20
3	17.85	214.20	285.60	357.00
3 ¼	19.33	231.96	309.28	386.60
3 ½	20.82	249.84	333.12	416.40
4	23.80	285.60	380.80	476.00
4 ½	26.77	321.24	428.32	535.40
5	29.75	357.00	476.00	595.00
5 ½	32.72	392.64	523.52	654.40
6	35.70	428.40	571.20	714.00
2x				
2 ¼	15.30	183.60	244.80	306.00
2 ½	17.00	204.00	272.00	340.00
2 ¾	18.70	224.40	299.20	374.00
3	20.40	244.80	326.40	408.00
3 ¼	22.10	265.20	353.60	442.00
3 ½	23.80	285.60	380.80	476.00
4	27.20	326.40	435.20	544.00
4 ½	30.60	367.20	489.60	612.00
5	34.00	408.00	544.00	680.00
6	40.80	489.60	652.80	816.00
8	54.40	652.80	870.40	1088.00
10	68.00	816.00	1088.00	1360.00
12	81.60	979.20	1305.60	1632.00
2¼x				
2 ½	19.13	229.56	306.08	382.60
2 ¾	21.03	252.36	336.48	420.60
3	22.96	275.52	367.36	459.20
3 ¼	24.86	298.32	397.76	497.20
3 ½	26.77	321.24	428.32	535.40
4	30.60	367.20	489.60	612.00
4 ½	34.42	413.04	550.72	688.40
5	38.25	459.00	612.00	765.00
6	45.90	550.80	734.40	918.00
2½x				
2 ¾	23.38	280.56	374.08	467.60
3	25.50	306.00	408.00	510.00
3 ¼	27.62	331.44	441.92	552.40
3 ½	29.75	357.00	476.00	595.00
4	34.00	408.00	544.00	680.00
4 ½	38.25	459.00	612.00	765.00
5	42.50	510.00	680.00	850.00
6	51.00	612.00	816.00	1020.00
3x				
4	40.80	489.60	652.80	816.00
5	51.00	612.00	816.00	1020.00
6	61.20	734.40	979.20	1224.00
4x				
6	81.60	979.20	1305.60	1632.00

TRADE CUSTOMS

Quotations—All quotations are subject to change without notice, and all sales are made subject to strikes, accidents, or other unavoidable delays. We reserve the right to cancel contracts not fully specified in time agreed upon. Special material is not subject to cancellation without our written consent.

Confirmation Orders—Confirming orders should be marked "Confirmation"—preferably across face of order. Confirmation orders not so marked may be treated as original open orders and duplicated—in such cases we will not be responsible for expenses and inconveniences incurred.

Terms—Our terms are 30 days net, or ½ of 1% discount for cash in 10 days from date of invoice. Initial buyers should accompany their first order with credit references.

Deliveries—Material from our warehouse is usually shipped the day order is received.

Orders by telephone are accepted at the risk of the customer, as shipments made before receipt of confirmation are for the service of the customer.

Promises on special work or material from mill are as closely estimated as possible, and we use our best efforts to ship within the time, but cannot guarantee to do so.

Claims—A clear receipt from the railroad places the responsibility for shortage or damage with the carrier. If there is a shortage or goods are damaged, receipt should be given carrier accordingly and agent should be requested to insert proper notation on freight bill, thus enabling you to recover damages from carrier without controversy.

Shortages accruing on carload consignments should be reported immediately to agent at destination. Carload shipments arriving in damaged condition should not be unloaded from car until carrier's representative has inspected.

When by request goods are forwarded via carriers whose charges do not cover the insuring of the goods, we will not insure shipment unless specifically instructed to do so.

Claims must be made in writing to carrier within six months, express claims within four months. Transportation companies cannot legally pay claims, unless filed within the periods specified.

Wrapping and Boxing—The Tariff Regulations specify that Cold Finished Shafting and Screw Stock when shipped by express must be wrapped or boxed the entire length and the following wrapping or boxing extras will apply:

Wrapping entire length, per 100 lbs.	$0.25
Minimum charge for wrapping, net	.25
Boxing, per 100 lbs.	.50
Minimum charge for boxing, net	.75

Crating—Cold Rolled, Cold Rolled Deep Drawing, Stretcher Leveled Electrical, Long Terne and Galvannealed Sheets will be crated for shipment, unless instructed to the contrary. On large orders where we can induce railroad to load carefully in box car without transferring, crating charges can be eliminated. Following are charges per crate, based on 500 lbs. or less per crate. Skeleton crates will be used unless otherwise instructed.

Size	Skeleton Crates	Full Crates
All Stock size sheets	$0.40 cents per 100 lbs. net weight of sheets Minimum charge $2.00	$0.95 per 100 lbs. net weight of sheets Minimum charge $4.00

Cold Drawn Mechanical Tubing—Tubes No. 17 ga. and lighter in any diameter or under ½" O. D. in any gauge, boxed or small quantities wired to a board without charge. All other sizes will be shipped unboxed unless specifically ordered boxed, in which case, boxing charges based on cost will be charged.

Packing—Boxing is charged on all small or broken lots.

Defective Material—Claims for defective material should be made immediately upon receipt of the goods.

All our material and fittings are carefully inspected and our machinery tested before shipment, but in spite of the greatest care it is sometimes impossible to detect all imperfections. We guarantee to replace, with new material, such goods as prove defective within a reasonable time, when properly worked or used, but under no circumstances will we be responsible for any damages beyond this. All material claimed defective must be held for our inspection and disposition. No charges for labor or expense required to repair defective goods or occasioned by them will be allowed, the measure of the damages being the price of the defective article.

Our standard Open Hearth bars are ordered to .15 to .20 Carbon, ladle analysis. If these bars are subjected to special processing, such as forging, cold working or heat treating, this is done at user's risk.

Boiler Construction—In the construction of boiler and pressure tanks, Government laws, and some State laws, require certain chemical and physical test reports and the stamping of boiler plates, heads and accessories with the maker's name and identification marks. If boiler construction material is to comply with any of these specifications, such information should be placed on the order. We can not assume any responsibility other than replacing of material that does not conform to necessary requirements used in the construction of any boiler or pressure tank.

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Alloy Bar Cutting
Struct. Shapes Saw Cutting 263
Plate Shearing Flame Cutting 265
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H. R. Carbon Bar & Angle Shearing

STANDARD VARIATIONS IN SHEARING

Material Sheared from Warehouse Stock

The shearing variation listed below governs shearing on commodities as specified for shipments from warehouse stock. All orders we accept are subject to these variations in shearing unless otherwise specified. Prices for accurate shearing quoted upon application.

Bar and Bar Shapes	Over	Under
Rounds and Squares up to 2 inch	1/4 inch	1/4 inch
Rounds and Squares 2 inch to 7 1/4 inch	1/4 "	1/4 "
Flats, 1/4 inch to 5/8 inch thick	1/8 "	1/8 "
Flats, over 5/8 inch thick	1/4 "	1/4 "
Bar Tees and Channels, up to but not including 3 inch	1/4 "	1/4 "
Bar Angles, up to but not including 3 inch	1/8 "	1/8 "

Structurals	Over	Under
Beams, Channels and Tees, 6 inch and under	1/4 inch	1/4 inch
Beams, Channels and Tees, over 6 inch	3/8 "	3/8 "
Angles, 3 inch and larger	1/8 "	1/8 "

Plates (Except Sketches)	Over	Under
U. M. Plates, 5/8 inch and under, 24 inches wide and under	1/4 inch	1/4 inch
U. M. Plates, over 5/8 inch, 24 inches wide and under	1/4 "	1/4 "
Plates, 5/8 inch and under, 36 inches wide and under	1/4 "	1/4 "
Plates, 5/8 inch and under, over 36 inches wide	1/4 "	1/4 "
Plates, over 5/8 inch up to 9 feet 6 inches on cut edge	5/16 "	5/16 "
Plates, all thicknesses where cutting edge is longer than 9 feet 6 inches	5/16 "	5/16 "

Sheets—Rectangular	Over	Under
Sheets, No. 8 and 10 Gauge	3/16 inch	3/16 inch
Sheets, No. 12 to 18 Gauge	1/8 "	1/8 "
Sheets, No. 20 to 30 Gauge	1/16 "	1/16 "

Strip Steel	Over	Under
.120" and over	1/8 inch	1/8 inch
.109" to .050", incl.	1/16 "	1/16 "
.042" to .016", incl.	1/32 "	1/32 "

WEIGHT OF FLAT BARS AND PLATES

To find Weight Per Foot of Flat Steel, Multiply Width in Inches by Figure Listed Below:

1/16"	Thickness	.2125	7/8"	Thickness	2.975	1 3/4"	Thickness	5.950
1/8"	"	.4250	15/16"	"	3.188	1 13/16"	"	6.163
3/16"	"	.6375	1"	"	3.400	1 7/8"	"	6.375
1/4"	"	.8500	1 1/16"	"	3.613	1 15/16"	"	6.588
5/16"	"	1.0600	1 1/8"	"	3.825	2"	"	6.800
3/8"	"	1.2750	1 3/16"	"	4.038	2 1/8"	"	7.225
7/16"	"	1.4880	1 1/4"	"	4.250	2 1/4"	"	7.650
1/2"	"	1.7000	1 5/16"	"	4.463	2 3/8"	"	8.075
9/16"	"	1.9130	1 3/8"	"	4.675	2 1/2"	"	8.500
5/8"	"	2.1250	1 7/16"	"	4.888	2 5/8"	"	8.925
11/16"	"	2.3380	1 1/2"	"	5.100	2 3/4"	"	9.350
3/4"	"	2.5500	1 9/16"	"	5.313	2 7/8"	"	9.775
13/16"	"	2.7630	1 5/8"	"	5.525	3"	"	10.200
			1 11/16"	"	5.738			

GALVANIZED AND STAINLESS STEEL GAUGES

Galvanized and Stainless Steel Sheets

Galvanized Sheet Gauge	Wt. per Sq. Ft. Lbs.	Stainless Sheet Gauge	Aver. Wt. per Sq. Ft. Lbs. for Chrome Iron Alloys	Aver. Wt. per Sq. Ft. Lbs. for Chrome Nickel Cold Rolled Alloys
10	5.7812	10	5.7937	5.9062
11	5.1562	11	5.1500	5.2500
12	4.5312	12	4.5063	4.5937
13	3.9062	13	3.8625	3.9375
14	3.2812	14	3.2187	3.2812
15	2.9687	15	2.8968	2.9531
16	2.6562	16	2.5750	2.6250
17	2.4062	17	2.3175	2.3625
18	2.1562	18	2.0600	2.1000
19	1.9062	19	1.8025	1.8375
20	1.6562	20	1.5450	1.5750
21	1.5312	21	1.4160	1.4437
22	1.4062	22	1.2875	1.3125
23	1.2812	23	1.1587	1.1813
24	1.1562	24	1.0300	1.0500
25	1.0312	25	.9013	.9187
26	.9062	26	.7725	.7875
27	.8437	27	.7081	.7218
28	.7812	28	.6438	.6562
29	.7187	29	.5794	.5906
30	.6562	30	.5150	.5250

Stainless Steel Plates

Approx. Fractions of an Inch	Approx. Wt. per Sq. Ft. Lbs. for Straight Chrome Alloys	Approx. Wt. per Sq. Ft. Lbs. for Chrome Nickel Alloys
1	40.478	41.342
15/16	37.949	38.759
7/8	35.419	36.175
13/16	32.889	33.591
3/4	30.359	31.007
11/16	27.829	28.423
5/8	25.299	25.839
9/16	22.769	23.255
1/2	20.239	20.671
15/32	18.974	19.379
7/16	17.709	18.087
13/32	16.444	16.795
3/8	15.179	15.503
11/32	13.914	14.211
5/16	12.650	12.920
9/32	11.385	11.628
17/64	10.752	10.981
1/4	10.120	10.336
15/64	9.487	9.690
7/32	8.855	9.044
13/64	8.222	8.398
3/16	7.590	7.752

The Galvanized Sheet Gauge, established by custom, is based on the United States Standard Gauge, each galvanized sheet gauge weight being 2.5 oz. per sq. ft. heavier than the gauge weight of the same United States Standard Gauge number, regardless of coating weights.

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NUMERICAL EQUIVALENTS

Decimals of an Inch for each 64th of an Inch with Millimeter Equivalents

Fraction	64ths	Decimal	Milli. (Approx.)	Fraction	64ths	Decimal	Milli. (Approx.)
	1	.01562	0.397		33	.51562	13.097
1/32	2	.03125	0.794	7/32	34	.53125	13.494
	3	.04687	1.191		35	.54687	13.891
1/16	4	.06250	1.588	9/16	36	.56250	14.288
	5	.07812	1.984		37	.57812	14.684
3/32	6	.09375	2.381	19/32	38	.59375	15.081
	7	.10937	2.778		39	.60937	15.478
1/8	8	.12500	3.175	5/8	40	.62500	15.875
	9	.14062	3.572		41	.64062	16.272
5/32	10	.15625	3.969	21/32	42	.65625	16.669
	11	.17187	4.366		43	.67187	17.066
3/16	12	.18750	4.763	11/16	44	.68750	17.463
	13	.20312	5.159		45	.70312	17.859
7/32	14	.21875	5.556	23/32	46	.71875	18.256
	15	.23437	5.953		47	.73437	18.653
1/4	16	.25000	6.350	3/4	48	.75000	19.050
	17	.26562	6.747		49	.76562	19.447
9/32	18	.28125	7.144	25/32	50	.78125	19.844
	19	.29687	7.541		51	.79687	20.241
5/16	20	.31250	7.938	13/16	52	.81250	20.638
	21	.32812	8.334		53	.82812	21.034
11/32	22	.34375	8.731	27/32	54	.84375	21.431
	23	.35937	9.128		55	.85937	21.828
3/8	24	.37500	9.525	7/8	56	.87500	22.225
	25	.39062	9.922		57	.89062	22.622
13/32	26	.40625	10.319	29/32	58	.90625	23.019
	27	.42187	10.716		59	.92187	23.416
7/16	28	.43750	11.113	15/16	60	.93750	23.813
	29	.45312	11.509		61	.95312	24.209
15/32	30	.46875	11.906	31/32	62	.96875	24.606
	31	.48437	12.303		63	.98437	25.003
1/2	32	.50000	12.700	1	64	1.00000	25.400

For Standard Gauges, see page 268.

WAREHOUSE CUTTING EXTRAS
OIL HARDENING AND CARBON TOOL STEEL

Extras for machine cutting and for wastage in shearing or cutting to dead lengths or multiples.

All extras in cents per pound.

Length of Cut or Multiple in Inches	Machine Cutting Dead Lgths.		Machine Cutting Multiples in Bar Lgths.	
	Rounds Up To 2" Inc. All Sqrs. Flats, Etc.	Rounds Over 2"	Rounds Up To 2" Inc. All Sqrs. Flats, Etc.	Rounds Over 2"
¼" to under 5/16"	$0.46	$0.46	....	....
5/16" " 3/8"	.43	.43	....	....
3/8" " 7/16"	.40	.40	....	....
7/16" " ½"	.37	.37	....	....
½" " 9/16"	.34	.34	....	....
9/16" " 5/8"	.31	.31	....	....
5/8" " 11/16"	.28	.28	....	....
11/16" " ¾"	.26	.26	....	....
¾" " 7/8"	.24	.24	....	....
7/8" " 1"	.20	.20	....	....
1" " 1⅛"	.18	.18	....	....
1⅛" " 1¼"	.16	.16	....	....
1¼" " 1⅜"	.14	.14	....	....
1⅜" " 1½"	.13	.13	....	....
1½" " 1⅝"	.12	.12	....	....
1⅝" " 1¾"	.11	.11	....	....
1¾" " 1⅞"	.10	.10	....	....
1⅞" " 2"	.095	.095	....	....
2" " 2¼"	.09	.09	....	....
2¼" " 2½"	.08	.08	....	....
2½" " 2¾"	.07	.07	....	....
2¾" " 3"	.065	.065	....	....
3" " 3¼"	.06	.06	....	....
3¼" " 3½"	.055	.055	....	....
3½" " 3¾"	.05	.05	....	....
3¾" " 4"	.045	.045	....	....
4" " 5"	.04	.04	....	....
5" " 6"	.035	.035	....	....
6" " 7"	.035	.035	$0.01	$0.01
7" " 8"	.03	.03	.01	.01
8" " 10"	.025	.025	.01	.01
10" " 14"	.02	.02	.01	.01
14" " 24"	.02	.015	.015	.01
24" " 36"	.02	.01	.02	.01
36" " 120"	.025	.01	.025	.01
120" and over	.01	.01	.01	.01

NOTE: Discs and die blocks cut from bars take the above extras, in addition to quantity, annealing, and all other extras.

QUANTITY EXTRAS
OIL HARDENING AND CARBON TOOL STEEL

The following extras are applicable to individual items of a size of a grade ordered at one time for shipment at one time:

1000 lbs. of a size or over.....Base
750 lbs. to 999 lbs. ..... ¼c Extra
500 lbs. to 749 lbs. ..... ½c Extra
400 lbs. to 499 lbs. .....1 c Extra
300 lbs. to 399 lbs. .....1½c Extra
200 lbs. to 299 lbs. .....2½c Extra
100 lbs. to 199 lbs. .....3½c Extra
50 lbs. to 99 lbs. .....4½c Extra
25 lbs. to 49 lbs. .....6 c Extra
Under 25 lbs.....7½c Extra

SHEARING CHARGES

HOT ROLLED CARBON BARS AND ANGLES

C. F. & H. R. Carbon Bar Hack Sawing

Rounds, Squares, Hexagons } 2" diameter and under.

Flats 1½"x6" and smaller.

Alloy Bar Cutting

Angles 2½"x2½"x½" and smaller, all lengths.

Angles 3" to 6" leg, inclusive, under 5'0" long.

Struct. Shapes Saw Cutting 263

TOTAL cuts of one size and grade determines the charge in cents, per cut.

Qualities .60 Carbon and over—See alloy bar cutting charges, and charge on net weight.

MINIMUM CHARGE—35c per item of one length, size or grade.

Plate Shearing Flame Cutting 265

Pounds per lineal foot	LENGTHS: Over 8'0" Any No. Cuts	4'0" to 8'0" incl. Under 50 cuts	4'0" to 8'0" incl. 50 cuts & over	1'0" to under 4'0" Under 50 cuts	1'0" to under 4'0" 50 cuts & over	Under 1'0" Under 50 cuts	Under 1'0" 50 cuts & over
Under 1.0 lb.	$0.03	$0.03	$0.02	$0.03	$0.02	$0.01	$0.01
1.0 to 2.5	.04	.03	.02	.03	.02	.02	.01
2.5 to 4.5	.05	.04	.03	.03	.02	.02	.01
4.5 to 7.5	.06	.05	.04	.03	.02	.02	.01
7.5 to 11.0	.07	.06	.04	.04	.03	.03	.02
11.0 to 15.0	.09	.08	.05	.04	.03	.03	.02
15.0 to 20.0	.11	.09	.06	.05	.04	.03	.02
20.0 and over	.13	.11	.08	.07	.05	.04	.03

Sheet Shearing 267

Rounds, Squares, Hexagons } Over 2"
Flats over 1½" thick
Bar Channels
Bar Tees
Bar Zees
} USE CARBON BAR HACK SAWING CHARGES

Angles over 6" either leg } USE FRICTION SAW CUTTING CHARGES

H. R. Carbon Bar & Angle Shearing

All bars and bar shapes weighing under 1 lb. per foot and all channels, tees, ovals, half ovals, half rounds, hexagons, bevel edge, square root angles, square twisted, round edge flats, tire steel, pickled and oiled strip, hot rolled strip, except $\frac{3}{16}$", wider than 6"—charge gross weight unless carried in lengths of 30'0" or longer. ROUNDS, SQUARES and FLATS and BAR ANGLES weighing over 1 lb. per foot and all sizes and shapes, carried 30'0" or longer, charge net weight.

COLD FINISHED AND HOT ROLLED CARBON BAR HACK SAW CUTTING CHARGES

All qualities under .60 Carbon. Also bar shapes and Hot Rolled Strip.

Charges in cents per cut to any one length 0'1" and over, of one size and one grade.

Lengths under 0'1"—use next higher weight bracket cutting charge.

QUANTITY DISCOUNTS do not apply on lengths over 8'0".

MINIMUM CHARGE applies where total cutting charge for one length, one size and one grade is less than the minimum charge.

Pounds per Lineal Foot	Minimum Charge	Over 8'0" long	8'0" long and under		
		Any quantity of cuts	Less than 10 cuts	10 to 100 cuts or 1000 lbs. of a size	100 cuts and over
Under 1.0 lb.	$0.35	$0.03	$0.03	$0.03	$0.02
1.0 to 2.5	.35	.04	.04	.03	.02
2.5 to 4.5	.35	.05	.05	.05	.04
4.5 to 7.5	.35	.06	.06	.06	.05
7.5 to 11.0	.35	.08	.08	.08	.06
11.0 to 15.0	.35	.11	.11	.09	.08
15.0 to 20.0	.40	.14	.14	.11	.11
20.0 to 27.0	.45	.17	.17	.14	.13
27.0 to 32.0	.50	.21	.21	.17	.16
32.0 to 43.0	.60	.26	.26	.21	.20
43.0 to 52.0	.65	.33	.33	.26	.25
52.0 to 71.0	.75	.41	.41	.33	.31
71.0 to 87.0	.90	.53	.53	.42	.40
87.0 to 116.0	1.05	.67	.67	.54	.50
116.0 to 139.0	1.25	.82	.82	.66	.62
139.0 to 180.0	1.50	1.00	1.00	.80	.75
180.0 to 203.0	1.70	1.20	1.20	.96	.90
203.0 to 245.0	1.90	1.40	1.40	1.12	1.05
245.0 and over	2.20	1.70	1.70	1.36	1.28

Cold Finished Carbon Bars Billed Net Weight.

All hot rolled bars and bar shapes weighing under 1 lb. per foot and all channels, tees, ovals, half ovals, half rounds, hexagons, bevel edge, square root angles, cold finished angles, square twisted, round edge flats, tire steel, pickled and oiled strip, hot rolled strip except $\frac{3}{16}$" wider than 6"—charge gross weight unless carried in lengths of 30'0" or longer. Hot rolled rounds, squares, flats and bar angles weighing over 1 lb. per foot and all sizes and shapes carried 30'0" or longer—charge net weight.

CHEMICAL EXTRAS—COLD FINISHED STEEL

	Per 100 Lbs.
Open Hearth S.A.E. 1035	$0.10
Open Hearth S.A.E. 1040—1045	.10
Open Hearth Screw Stock S.A.E. 1120	.10
High Sulphur Bessemer Screw Stock	.10
High Manganese Screw Stock (S.A.E. X1314)	.20
(G.M.C. 1335X)	.35
Ledloy Quality—Extra for lead content in addition to above chemical extras	.15

QUANTITY EXTRAS—COLD FINISHED STEEL

Quantity extras are included in the Ryerson base price pages, which are mailed on request.

ALLOY BAR CUTTING CHARGES

Hot Rolled and Cold Finished S.A.E. Alloys, except Stainless, also Carbon Steel Bars .60 Carbon and over.

Hack sawing charges per cut to any one length 0'1" and over, of one size and one grade.

Lengths under 0'1"—use next higher weight bracket cutting charge.

QUANTITY DISCOUNTS do not apply on lengths over 8'0".

MINIMUM CHARGE applies where total cutting charge for one length, one size and one grade is less than the minimum charge.

Pounds per Lineal Feet	Minimum Charge	Over 8'0" long	8'0" long and under		
		Any quantity of cuts	Less than 10 cuts	10 to 100 cuts or 1000 lbs. of a size	100 cuts and over
Under 1.0 lb.	$0.35	$0.04	$0.04	$0.04	$0.03
1.0 to 2.5	.35	.05	.05	.05	.04
2.5 to 4.5	.35	.08	.08	.08	.06
4.5 to 7.5	.35	.09	.09	.09	.07
7.5 to 11.0	.39	.12	.12	.12	.09
11.0 to 15.0	.41	.17	.17	.17	.13
15.0 to 20.0	.47	.21	.21	.17	.16
20.0 to 27.0	.54	.26	.26	.21	.20
27.0 to 32.0	.61	.32	.32	.26	.24
32.0 to 43.0	.73	.39	.39	.31	.29
43.0 to 52.0	.82	.50	.50	.40	.38
52.0 to 71.0	.96	.62	.62	.50	.47
71.0 to 87.0	1.17	.80	.80	.64	.60
87.0 to 116.0	1.39	1.01	1.01	.81	.76
116.0 to 139.0	1.66	1.23	1.23	.98	.92
139.0 to 180.0	2.00	1.50	1.50	1.20	1.13
180.0 to 203.0	2.30	1.80	1.80	1.44	1.35
203.0 to 245.0	2.60	2.10	2.10	1.68	1.58
245.0 and over	3.05	2.55	2.55	2.04	1.91

FRICTION SAW CUTTING STRUCTURAL SHAPES

Beams, Channels, Tees, Zees 3" and over and Angles over 6" either leg

Angles 6" leg and under—See Shearing Schedule.

Lengths 5'0" and over, no charge for cutting.

Minimum Charge 35c per item of one length and one size.

Pounds per lineal foot	Under 5'-0" long Per Cut
Under 10 lbs.	$0.07
10.0 to under 17.5	.10
17.5 to under 30.0	.15
30.0 to under 45.0	.20
45.0 to under 65.0	.25
65.0 to under 90.0	.30
90.0 and over	.35

Any section over 10" Flange—where cut to under 5'0" long—Price on Application.

RAIL CUTTING CHARGES

Per 100 Lb. Charge

	2 ft. and Over	Under 2 ft. to 1 ft.	Under 1 ft. to 6"	Under 6" to 4"	Under 4" to 2"
All Rails	$0.25	$0.40	$0.85	$1.40	$2.30

All charged on Gross Weight basis.

C. F. & H. R. Carbon Bar Hack Sawing

Alloy Bar Cutting

Struct. Shapes Saw Cutting 263

Plate Shearing Flame Cutting 265

Sheet Shearing 267

PLATE SHEARING EXTRAS

$\frac{3}{16}$" to 1" Thick Inclusive, Including U. M., Sheared, Flange, Firebox, High Carbon, Copper Alloy and Floor Plates.

TO LENGTH ONLY

Per 100 Lbs.

Thickness	LENGTH				
	5 ft. and Longer	Under 5 ft. to 3 ft.	Under 3 ft. to 2 ft.	Under 2 ft. to 1 ft.	Under 1 ft. to Over 6"
$\frac{3}{16}$" to 1" incl.	$0.00	$0.10	$0.25	$0.50	$1.55
Over 1"	See Flame Cutting Extras.				

SHEARING TO WIDTH AND LENGTH

WIDTHS OVER 6"

Thickness	LENGTH				
	5 ft. and Longer	Under 5 ft. to 3 ft.	Under 3 ft. to 2 ft.	Under 2 ft. to 1 ft.	Under 1 ft. to over 6"
$\frac{3}{16}$" to $\frac{5}{16}$" incl.	$0.30	$0.40	$0.55	$0.80	$1.85
Over $\frac{5}{16}$" to $\frac{1}{2}$" incl.	.25	.35	.50	.75	1.80
Over $\frac{1}{2}$" to 1" incl.	.20	.30	.45	.70	1.75
Over 1"	See Flame Cutting Extras.				

Charged on gross weight of nearest stock width.

WIDTHS 6" AND NARROWER

Thickness	LENGTH				
	5 ft. and Longer	Under 5 ft. to 3 ft.	Under 3 ft. to 2 ft.	Under 2 ft. to 1 ft.	Under 1 ft. to over 6"
$\frac{3}{16}$" to $\frac{5}{16}$" incl.	$0.60	$0.80	$1.10	$1.60	$3.70
Over $\frac{5}{16}$" to $\frac{1}{2}$" incl.	.50	.70	1.00	1.50	3.60
Over $\frac{1}{2}$" to 1" incl.	.40	.60	.90	1.40	3.50
Over 1"	See Flame Cutting Extras.				

Charged on gross weight of nearest stock width published for .15 to .20 carbon bars. Minimum charge of 35c net for each thickness.

SKETCH PLATE SHEARING

Ordinary Straight side Sketch Plates up to 1" thick inclusive, with no re-entrant cuts, based on gross weight of rectangular plate required in nearest stock width.

Sketch Plates over 1" thick, see flame cutting schedule.

Charge per 100 lbs.—any width.

Thickness	LENGTH				
	5 ft. and Longer	Under 5 ft. to 3 ft.	Under 3 ft. to 2 ft.	Under 2 ft. to 1 ft.	Under 1 ft. to Over 6"
$\frac{3}{16}$" to $\frac{5}{16}$" incl.	$0.40	$0.50	$0.65	$0.90	$1.95
Over $\frac{5}{16}$" to $\frac{1}{2}$" incl.	.35	.45	.60	.85	1.90
Over $\frac{1}{2}$" to 1" incl.	.30	.40	.55	.80	1.85
Over 1"	See Flame Cutting Extras.				

UNIVERSAL MILL PLATE CUTTING

Universal Mill Plates over 1" thick, stock widths up to 14" wide inclusive, cut to length, use structural shape cutting extras.

CIRCLE CUTTING

See Flame Cutting

PLATES—FLAME CUT EXTRAS

Extras Per Lineal Foot

Minimum Flame Cutting Charge—50c Net per Thickness

Thickness Inches	Under 5 ft.	5 Ft. & Over	Thickness Inches	Under 5 ft.	5 Ft. & Over
3/16	$0.09	$0.07	2	$0.38	$0.30
1/4	.10	.08	2 1/4	.43	.34
5/16	.11	.09	2 1/2	.46	.37
3/8	.11	.09	2 3/4	.52	.41
7/16	.13	.10	3	.57	.45
1/2	.14	.11	3 1/4	.61	.49
5/8	.16	.12	3 1/2	.67	.53
3/4	.17	.13	3 3/4	.71	.57
7/8	.19	.15	4	.76	.61
1	.20	.16	4 1/2	.86	.69
1 1/8	.23	.18	5	.96	.77
1 1/4	.25	.20	5 1/2	1.08	.86
1 3/8	.27	.21	6	1.20	.95
1 1/2	.29	.23	6 1/2	1.34	1.07
1 5/8	.32	.25	7	1.50	1.20
1 3/4	.34	.27	8	1.83	1.46
			10	2.51	2.01

Charges based on total lineal feet of cutting required for one plate. Fractions of an inch charged at next full inch.

Plate Shearing Flame Cutting 265

RECTANGULAR PLATES

Over 1" thick charged on net weight plus Flame Cutting one side and one end at above extras unless Flame Cutting all edges is specified when charge will be for two sides and two ends. 1" thick and under will be charged for gross weight of nearest stock width and Flame Cutting of 4 edges.

Sheet Shearing 267

CIRCULAR PLATES

All thicknesses, will be charged on the basis of gross weight of smallest square from which circle can be cut (size of square 1/2" larger than diameter specified), plus flame cutting charge based on circumference of circle.

RINGS

All thicknesses, will be charged at the gross weight of the nearest square from which ring can be flame cut (size of square 1/2" larger than diameter specified), plus lineal foot charge for flame cutting inner and outer circumferences.

SKETCHES WITH STRAIGHT SIDES

With straight sides and no re-entrant cuts.

Thicknesses over 1" will be charged at the gross weight of smallest rectangle from which sketch can be cut (size of rectangle 1/2" larger than plate required), plus charge for lineal feet for perimeter of sketch.

Thicknesses 1" and under will be charged at the gross weight of nearest stock width from which sketch can be cut plus charge for lineal feet of perimeter of sketch.

UNUSUAL SKETCHES

Including curves, re-entrants cuts, etc.: Extras quoted on application. When Sketch Plates can be nested to avoid excessive waste, charge will be made accordingly.

SHEET SHEARING EXTRAS

Except Stainless and Electrical Sheets

Extras Per 100 Lbs.

LENGTH ONLY

Gauge	5 ft. and Over	Under 5 ft. to 3 ft.	Under 3 ft. to 2 ft.	Under 2 ft. to 1 ft.
*3/16"				
No. 8	$0.25	$0.35	$0.45	$0.55
10	.30	.40	.50	.60
12	.35	.45	.55	.65
14	.40	.50	.60	.70
16	.45	.55	.65	.75
18	.50	.60	.70	.80
20	.55	.65	.75	.85
22	.60	.70	.80	.90
24	.65	.75	.85	.95
26	.70	.80	.90	1.00
27	.75	.85	.95	1.05
28	.80	.90	1.00	1.10
29	.85	.95	1.05	1.15
30	.90	1.00	1.10	1.20

WIDTH ONLY

Gauge	6" and Over	Over 4" to 5 15/16"	Over 3" to 4"	Over 2" to 3"	1" to 2"	Under 1"
*3/16"						
No. 8	$0.25	$0.30	$0.35	$0.45	$0.70	$0.95
10	.30	.35	.40	.50	.75	1.00
12	.35	.40	.45	.50	.75	1.00
14	.40	.45	.50	.70	.80	1.10
16	.45	.45	.50	.75	.90	1.10
18	.50	.55	.60	.80	1.00	1.30
20	.55	.60	.70	.90	1.15	1.50
22	.60	.70	.80	1.00	1.25	1.60
24	.65	.75	.90	1.10	1.50	1.75
26	.70	.90	1.00	1.25	1.50	2.00
27	.75	1.00	1.10	1.40	1.75	2.50
28	.80	1.00	1.10	1.40	1.75	2.50
29	.85	1.00	1.10	1.40	1.75	2.50
30	.90	1.00	1.10	1.40	1.75	2.50

* All 3/16" material wider than 6", see plate cutting schedule.

For shearing to lengths and widths under 6 inches, see below.

Shearing to Length Where Widths Are Under 6", add the following to the Width Charges:

For lengths of 3' and over.....2 times width charge
For lengths under 3' to 1'.....2½ times width charge
For lengths under 1'.....3 times width charge

All sheets cut to size charged on gross weight.

Intermediate gauges will be charged for on the basis of the next lighter gauge.

Above charges apply on all Diamond and Small Diamond Pattern Floor Plates lighter than No. 8 Gauge.

EARING TO LENGTHS AND WIDTHS SEE NEXT PAGE

SHEET SHEARING EXTRAS—(Cont'd)

Except Stainless and Electrical Sheets

Extras Per 100 Lbs.

LENGTH AND WIDTH

Gauge	SHEARING TO WIDTH OF 6" AND OVER. AND CUTTING TO LENGTH				
	5 ft. and Over	Under 5 ft. to 3 ft.	Under 3 ft. to 2 ft.	Under 2 ft. to 1 ft.	Under 1 ft. to 6" incl.
*$\frac{3}{16}$"					
No. 8	$0.45	$0.55	$0.65	$0.75	$0.95
10	.50	.60	.70	.80	1.00
12	.55	.65	.75	.85	1.10
14	.60	.70	.80	.90	1.20
16	.65	.75	.85	.95	1.30
18	.70	.80	.90	1.00	1.50
20	.75	.85	.95	1.05	1.50
22	.80	.90	1.00	1.10	1.50
24	.85	.95	1.05	1.15	1.50
26	.90	1.00	1.10	1.20	2.00
27	.95	1.05	1.15	1.25	2.00
28	1.00	1.10	1.20	1.30	2.00
29	1.05	1.15	1.25	1.35	2.00
30	1.10	1.20	1.30	1.40	2.00

* All $\frac{3}{16}$" material wider than 6", see plate cutting schedule.

Sheet Shearing 267

Shearing to Length Where Widths Are Under 6", add the following to the Width Charges:

For lengths of 3′ and over.....2 times width charge
For lengths under 3′ to 1′.....2½ times width charge
For lengths under 1′.....3 times width charge

All sheets cut to size charged on gross weight.

Intermediate gauges will be charged for on the basis of the next lighter gauge.

Above charges apply on all Diamond and Small Diamond Pattern Floor Plates lighter than No. 8 Gauge.

SHEARING TO LENGTH OR WIDTH
SEE PRECEDING PAGE

RYERSON CERTIFIED STEELS

In 1842, when Industry's problem was availability of steel, Ryerson built up large and complete stocks. Later, when speed became important, Ryerson developed new, faster methods of cutting, handling and shipping. Now, Ryerson continues to lead in meeting Industry's requirements with higher, uniform quality.

STANDARD GAUGES

Gauge Number	U. S. Standard: Wt. Per Sq. Ft. Steel	U. S. Standard: Revised Approx. Thickness for Steel	U. S. Standard: Approx. Fraction	Birmingham Wire Gauge or Stubs Gauge: Thickness in Inches	Birmingham Wire Gauge or Stubs Gauge: Wt. Sq. Ft. Steel	Brown & Sharpe or American Wire	Std. Steel Wire Gauge or Washburn & Moen
¼" thick & heavier are classed as Plates.							
7	7.500	.1793	3/16	.180	7.344	.14428	.1770
8	6.875	.1644	11/64	.165	6.732	.12849	.1620
9	6.250	.1494	....	.148	6.038	.11443	.1483
10	5.625	.1345	9/64	.134	5.467	.10189	.1350
11	5.000	.1196	1/8	.125	4.896	.09074	.1205
12	4.375	.1046	7/64	.109	4.497	.08080	.1055
13	3.750	.0897	3/32	.095	3.876	.07196	.0915
14	3.125	.0747	5/64	.083	3.386	.06408	.0800
15	2.812	.0673	....	.072	2.937	.05706	.0720
16	2.500	.0598	1/16	.065	2.651	.05082	.0625
17	2.250	.0538	....	.058	2.366	.04525	.0540
18	2.000	.0478	1/20	.049	1.999	.04030	.0475
19	1.750	.0418	....	.042	1.712	.03589	.0410
20	1.500	.0359	3/80	.035	1.428	.03196	.0348
21	1.375	.0329	.....	.032	1.305	.02846	.0317
22	1.250	.0299	1/32	.028	1.142	.02534	.0286
23	1.125	.0269	....	.025	1.020	.02257	.0258
24	1.000	.0239	1/40	.022	.897	.02010	.0230
25	.875	.0209	....	.020	.816	.01790	.0204
26	.750	.0179	.....	.018	.734	.01594	.0181
27	.6875	.0164	....	.016	.652	.01419	.0173
28	.625	.0149	1/64	.014	.571	.01264	.0162
29	.5625	.0135	....	.013	.530	.01125	.0150
30	.500	.0120	1/80	.012	.489	.01002	.0140

To avoid errors specify decimal part of an inch or mention gauge number and the name of the gauge.

Orders for a definite gauge weight or gauge thickness, will be subject to standard gauge weight or gauge thickness tolerance, applying equally plus and minus from the ordered gauge weight or gauge thickness.

U. S. Standard Gauge—Iron and steel sheets.

Note: U. S. Standard Gauge was established by act of Congress in 1893, in which weights per square foot were indicated by gauge number. The weight, not thickness, is the determining factor when the material is ordered to this gauge.

Birmingham or Stubs Gauge—Hot & cold rolled strip, round edge flat wire, spring steel, brass, copper, seamless steel & stainless tubing & boiler tubes.

Brown & Sharpe Gauge—Copper, brass & phosphor bronze in sheets, bars & wire.

Washburn & Moen Gauge—Round steel wire in black annealed, bright basic, galvanized, tinned and copper coated.

For Galvanized and Stainless Steel Gauges, see page 259.

STEEL PLATES, THEORETICAL WEIGHT PER SQUARE FOOT

Size in Inches	Wt. per Square Ft. Lbs.	Size in Inches	Wt. per Square Ft. Lbs.	Size in Inches	Wt. per Square Ft. Lbs.	Size in Inches	Wt. per Square Ft. Lbs.
3/16	7.65	1	40.80	2-1/2	102.00	5	204.00
1/4	10.20	1-1/8	45.90	2-3/4	112.20	5-1/2	224.40
5/16	12.75	1-1/4	51.00	3	122.40	6	244.80
3/8	15.30	1-3/8	56.10	3-1/4	132.60	6-1/2	265.20
7/16	17.86	1-1/2	61.20	3-1/2	142.80	7	285.60
1/2	20.40	1-5/8	66.30	3-3/4	153.00	7-1/2	306.00
9/16	22.96	1-3/4	71.40	4	163.20	8	326.40
5/8	25.50	2	81.60	4-1/4	173.40	9	367.20
3/4	30.60	2-1/4	91.80	4-1/2	183.60	10	408.00
7/8	35.70						

RYERSON STEEL-SERVICE PLANTS

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Offices and Warehouses: 5200 Grays Avenue
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Teletype: PHILA. 393

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New York City Telephone: Rector 2-3700
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Offices and Warehouses: 40 Stanley Street
Teletype: BUF. 87—Telephone: HUmboldt 3311

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Teletype: CAMB. 186—Telephone: Kirkland 6000

CLEVELAND, O. **Offices and Warehouses:** E. 53rd & Lakeside Ave.
Teletype: CLEVE. 381—Telephone: Henderson 1000

CINCINNATI, O. *Mail Address: Annex Box 300, Cincinnati, O.
Offices and Warehouses: Front St. and Freeman Ave.
Teletype: CIN. 297—Telephone: Cherry 3232

DETROIT, MICH. **Offices and Warehouses:** 1600 E. Euclid Ave.
Teletype: DET. 58—Telephone: MAdison 3860

CHICAGO, ILL. *Mail Address: Box 8000-A, Chicago, Ill.
General Offices and Warehouses: 16th and Rockwell Sts.
Teletype: CGO 614-615—Telephone: ROCkwell 2121
City Office: 38 South Dearborn St., Telephone: CENtral 7920
Hammond, Indiana Telephone: Enterprise 8100

ST. LOUIS, MO. **Offices and Warehouses:** 5 Clinton Street
Teletype: ST. L. 83—Telephone: Central 1020

MILWAUKEE, WIS. **Offices and Warehouses:** 320 So. 19th Street
Telephone: Mitchell 7000

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Phone: Plaza 1660

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ROCHESTER, N. Y.
217 East Ave. Phone: Stone 729

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333 No. Pennsylvania St.
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KANSAS CITY, MO.
526 Law Bldg. Phone: Victor 0982

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605 Denver National Bank Bldg.
Phone: Keystone 2428

MINNEAPOLIS, MINN.
617 Washington Ave., North Minneapolis
Phones: Atlantic 2563 and Midway 4431

ROCKFORD, ILL.
608 Manufacturers' National Bank Bldg. Phone: Main 4991

ROCK ISLAND, ILL.
14 State Bank Bldg.
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313 Thompson Bldg., Phone: 2-4773

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